



Natural Environment Study

SR-73 Basin Sedimentation Project

SR-73 Between the Catalina Toll Plaza and El Toro Road Off-Ramp

12-ORA-73 (PM 10.0-24.5)

EA 0H4400

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STATE OF CALIFORNIA
Department of Transportation

Prepared By: Kristen Yee Date: 9/16/09
Kristen Yee, Assistant Biologist
LSA Associates, Inc.
(949) 553-0666

Approved By: Lesley Hill Date: 9/17/09
Lesley Hill, Associate Environmental
Planner, Biologist
(949) 724-2043
Environmental Planning Branch C
Caltrans District 12/Orange County

Approved By: Charles Baker Date: 9-21-09
Charles Baker, Branch Chief
(949) 724-2252
Environmental Planning Branch C
Caltrans District 12/Orange County

Summary

The California Department of Transportation (Caltrans) District 12, in cooperation with the Cities of Irvine and Laguna Beach, proposes to reduce sedimentation runoff into three storm water basins along the San Joaquin Hills Transportation Corridor (State Route 73 [SR-73]) with Best Management Practices (BMPs). Basin 765L is located on the southbound side of SR-73 at the El Toro Road off-ramp, Basin 780R is located on the northbound side of SR-73 at the Laguna Canyon Road off-ramp, and Basin 878R is also located on the northbound side of SR-73, just south of the Catalina Toll Plaza.

The purpose of the proposed project is to reduce erosion of internal basin slopes, erosion of adjacent slopes, bare areas within the median, and any areas identified within the Caltrans right-of-way (ROW) as source contributors that drain into basins. Low-Impact Development (LID), such as drought-tolerant plants, native plants, and erosion control measures, is proposed to treat bare soil and eroded areas in the project area. Temporary irrigation will be provided for new planting in areas where there is no available water source or existing irrigation. Basin perimeter slopes with existing irrigation that require additional planting will be repaired or upgraded for efficiency to minimize water usage during plant establishment.

A Natural Environment Study (Minimal Impacts) (NES[MI]) prepared by LSA Associates, Inc. in January 2009 discussed 39 storm water basins along SR-73, excluding Basins 765L, 780R, and 878R. Due to environmental resources, these three basins were removed from the NES(MI), but they are discussed further in this Natural Environment Study (NES).

In 2008 and 2009, reconnaissance-level biological resource surveys, habitat assessments, focused wildlife surveys, and a jurisdictional delineation were performed to document the existing conditions of biological resources at the 39 storm water basins. The Biological Study Area (BSA) included these artificially constructed basins within Caltrans ROW. The majority of these basins are dominated by ruderal and ornamental vegetation.

The coastal California gnatcatcher (CAGN) was observed during 2008 reconnaissance-level biological resource surveys, but not in the vicinity of Basin 765L, 780R, and 878R, the basins included in this report. However, potential CAGN habitat occurs on the northern slope across the Laguna Canyon Road off-ramp of

Basin 780R. Therefore, modified focused CAGN surveys were performed in 2009 at Basin 780R; no CAGN were detected during these surveys. Several special-status species were observed within the BSA during surveys, however.

A formal Jurisdictional Delineation survey performed in 2008 determined that Basin 765L is potentially jurisdictional, including wetland areas subject to the jurisdiction of the United States Army Corps of Engineers (USACE), California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB). However, no work is proposed at Basin 765L, and permits from the USACE, CDFG, and RWQCB will not be required.

A combination of avoidance and minimization measures and compensatory mitigation would reduce the overall adverse effects to biological resources. Invasive species would be removed from the project work area and controlled during construction to ensure compliance with Executive Order (EO) 13112.

Federal Section 7 consultation between Caltrans and the United States Fish and Wildlife Service (USFWS) and Section 2080 consultation with CDFG are not expected to be necessary.

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List of Abbreviated Terms

ac	Acres
amsl	above mean sea level
BA	Biological Assessment
BMPs	best management practices
BSA	Biological Study Area
BUOW	burrowing owl
CAGN	California gnatcatcher
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPSEI	CNPS On-Line Electronic Inventory of Rare and Endangered Vascular Plants of California
CSC	California Species of Special Concern
CSS	coastal sage scrub
CWA	Clean Water Act
EA	Expenditure Authorization
EO	Executive Order
ESA	Environmentally Sensitive Area
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
ft	feet
HCP	Habitat Conservation Plan
in	inch
LBV	least Bell's vireo
LID	Low-Impact Development
LSA	LSA Associates, Inc.

MBTA	Migratory Bird Treaty Act
mi	miles
MOU	Memorandum of Understanding
NCCP	Natural Communities Conservation Plan
NES	Natural Environment Study
OHW	ordinary high water mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SR-73	State Route 73
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Chapter 1. Introduction

The California Department of Transportation (Caltrans) District 12, in cooperation with the Cities of Irvine and Laguna Beach, proposes to reduce sedimentation runoff into three storm water basins along the San Joaquin Hills Transportation Corridor (State Route 73 [SR-73]) with best management practices (BMPs) (Figure 1). Basin 765L is located on the southbound side of SR-73 at the El Toro Road off-ramp, Basin 780R is located on the northbound side of SR-73 at the Laguna Canyon Road off-ramp, and Basin 878R is also located on the northbound side of SR-73, just south of the Catalina Toll Plaza (Figure 2). The entire project length is located in Orange County. The Expenditure Authorization (EA) number for the project is 12-0H4400.

1.1. Project History

1.1.1. Project Purpose and Need

The purpose of the project is to reduce sedimentation runoff into three storm water basins along SR-73 with BMPs by reducing erosion of internal basin slopes, erosion of adjacent slopes, bare areas within the median, and any areas identified within Caltrans right-of-way (ROW) as source contributors that drain into basins.

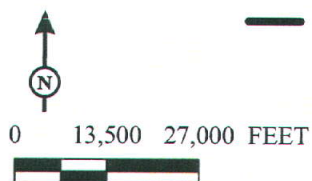
1.2. Project Description

The project proposes to treat bare soil and eroded areas with Low-Impact Development (LID) such as drought-tolerant plants, native plants, and erosion control measures. These measures include repairing and reestablishing eroded areas with geotextile reinforcement and then backfilling with soil to reestablish the slope with native and drought-tolerant plants. Temporary irrigation will be provided for new planting in areas where there is no available water source or existing irrigation. Basin perimeter slopes with existing irrigation that require additional planting will be repaired or upgraded for efficiency to minimize water usage during plant establishment. Specific project activities for each basin are discussed further below.



FIGURE 1

Legend
 — Project Alignment



SR-73 Basin Sedimentation Project

Project Vicinity

SOURCE: USGS 7.5' QUAD - LAGUNA BEACH ('81); SAN JUAN CAPISTRANO ('81); TUSTIN ('81); CALIF.
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FIGURE 2

SR-73 Basin Sedimentation Project

Project Location
EA# 0H4400
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SOURCE: USGS 7.5' QUAD - LAGUNA BEACH (81); NEWPORT BEACH (81); SAN JUAN CAPISTRANO (81); TUSTIN (81); CALIF.

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No work is proposed to occur at Basin 765L. At Basin 780R, additional vegetation within the basin slope and adjacent slopes that are a source of sedimentation will be enhanced with drought-tolerant and native plants, and an erosion control blanket. A grass mix will be added to the bottom of the basin. A retaining wall will be installed at the toe of the slope along the abutment bridge. The slope with coastal sage scrub (CSS) vegetation to be temporarily impacted along the northbound Laguna Canyon Road off-ramp will be regraded and revegetated with CSS species. Major grading work is proposed to occur on the slope south of the northbound off-ramp that will be stabilized with geotextile reinforcement. Fiber rolls will be added along the existing v-ditch and the newly constructed v-ditch at the toe of the slopes.

Work proposed to occur at Basin 878R will supplement vegetation within the basin slope and adjacent slopes that are a source of sedimentation with drought-tolerant and native plants, and an erosion control blanket. Newly constructed v-ditches will be placed at the north side of the basin slope to carry storm water in the basin, resulting in minor temporary and permanent impacts to CSS vegetation. A newly constructed apron and gravel access road are also proposed to be installed. Fiber rolls will be placed at the toe of the slope and basin drain inlets to prevent sediment deposit in the existing v-ditches. Around the concrete base of the inlet, fiber rolls and an erosion control blanket will be installed to prevent further erosion and scouring.

Chapter 2. Study Methods

2.1. Regulatory Requirements

2.1.1. Review of Jurisdiction Subject to Section 404 of the Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in 33 Code of Federal Regulations (CFR) Part 328 and currently includes (1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all impoundments of waters mentioned above, (4) all tributaries with a significant water quality nexus to waters mentioned above, (5) the territorial seas, and (6) all wetlands adjacent to waters mentioned above.

The discharge of dredged or fill material (temporarily or permanently) into waters of the United States (including wetlands) requires prior authorization from the USACE pursuant to Section 404 of the CWA. Based on a jurisdictional delineation with concurrence from the USACE, a Section 404 permit is not expected to be required for this project.

2.1.2. Review of Jurisdiction Subject to Section 1600 of the California Fish and Game Code

Pursuant to Division 2, Chapter 6, Sections 1600–1602 of the California Fish and Game Code, the California Department of Fish and Game (CDFG) regulates all diversions, obstructions, or changes to the natural flow, bed, channel, or bank of any river, stream, or lake that supports fish or wildlife.

Unlike the USACE, CDFG regulates not only the discharge of dredged or fill material, but also all activities that alter streams and lakes and their associated habitat. These additional areas include some artificial stock ponds and irrigation ditches constructed on uplands and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status. In addition, the lateral extent of streambed may, in some situations, extend to include broader cross-sectional widths of drainages and floodplains above and beyond the area contained

within the ordinary high water mark (OHWM), depending on the hydrological regime of a stream or river. For this reason, the dimensions of a CDFG jurisdictional streambed may vary substantially from the measured OHWM within the same stream or river.

A CDFG Streambed Alteration Notification (SAN) is required for all activities resulting in impacts to streambeds and their associated riparian habitats. Based on a jurisdictional delineation, a SAA is not expected to be required for this project.

2.1.3. Review of Jurisdiction Subject to Section 401 of the Clean Water Act

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those subject to USACE jurisdiction (i.e., waters of the United States, including any wetlands). The RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

Based on a jurisdictional delineation with concurrence from the USACE, a Section 401 Water Quality Certification from the RWQCB is not expected to be required for this project.

2.1.4. Federal Endangered Species Act

Under the provisions of Section 7(a)(2) of the federal Endangered Species Act (FESA), a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the United States Fish and Wildlife Service (USFWS) to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat that may be affected by the project. Chapter 4 of this Natural Environment Study (NES) provides details on the proposed project's impacts to federally listed plant and wildlife species.

Federal Section 7 consultation is not expected to be required for the proposed project.

2.1.5. California Endangered Species Act

The California Endangered Species Act (CESA) is administered by CDFG and prohibits the take of plant and animal species identified as either threatened or

endangered in the State of California by the Fish and Game Commission (California Fish and Game Code Section 2050–2097). “Take” means to hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Sections 2091 and 2081 of CESA allow CDFG to authorize exceptions to the prohibition of take of the State-listed threatened or endangered plant and animal species for purposes such as public and private development. CDFG requires formal consultation to ensure that these actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat. Chapter 4 of this NES provides details on the proposed project’s impacts to State-listed plant and wildlife species.

Section 2080 consultation with CDFG is not expected to be required for the proposed project.

2.1.6. Migratory Bird Treaty Act

Native bird species and their nests are protected under the Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] 703-712). The MBTA states that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird or its eggs, parts, or nests, except as authorized under a valid permit.

Executive Order (EO) 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs federal agencies “taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding (MOU) with the Fish and Wildlife Service that promotes the conservation of migratory bird populations.”

2.1.7. Natural Community Conservation Plan and Habitat Conservation Plan

The Coastal/Central Orange County Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) was approved in 1996. The NCCP/HCP and its associated 37,000-acre (ac) reserve is the result of conservation planning at the natural community level by federal and State wildlife agencies, County and city governments, major landowners, and the environmental community. The result is a regional open space reserve offering permanent protection to a wide range of local wildlife and natural habitats in large-scale ecosystem landscapes while allowing for

planned economic development outside of the protected reserve areas. HCPs came out of an amendment to FESA allowing “incidental take” by using a planning process that protects listed species while allowing for lawful activities of landowners in the presence of listed species. Chapter 4 of this NES provides an analysis of CSS habitat and special-status species in the context of the NCCP/HCP.

2.1.8. Invasive Species

On February 3, 1999, President Clinton signed EO 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “...any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999, directs the use of the State’s noxious weed list to define the invasive plants that must be considered as part of the California Environmental Quality Act (CEQA) analysis for a proposed project.

2.2. Studies Required

2.2.1. Definition of Biological Study Area

The limits of the Biological Study Area (BSA) were extended beyond the maximum extent of potential direct effects where necessary to identify sensitive biological resources within and immediately adjacent to the project area. In general, this provided for a survey area that was larger than the area of potential direct effects. The BSA was then used to define the study limit boundaries for all biological studies conducted during 2008 and 2009.

2.2.2. General Surveys and Habitat Assessments

Prior to performing the field surveys, existing documentation relevant to the BSA was reviewed. The most recent records of the California Natural Diversity Database (CNDDB) (Version 3.1.0) and the California Native Plant Society’s (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI 2009) were reviewed for the quadrangles containing and surrounding the BSA (i.e., the *Orange, Newport Beach, Tustin, El Toro, Laguna Beach, San Juan Capistrano, and Dana Point, California* United States Geological Survey [USGS] 7.5-minute

quadrangles). These databases contain records of reported occurrences of federally or State-listed endangered, threatened, proposed endangered, or proposed threatened species; California Species of Special Concern (CSC); or other special-status species or habitat that may occur within or in the immediate vicinity of the BSA.

The reconnaissance-level survey and habitat mapping was conducted on November 7 and 18, 2008, and April 15, 2009, by LSA Associates, Inc. (LSA) biologists Elizabeth Delk, Corey Knips, Ingri Quon, and Leo Simone and Caltrans biologists Arianne Preite and Lesley Hill. The biological resources of the site were generally characterized and the presence or absence of special-status plants and animals, or the likelihood of their occurrence, in the BSA was ascertained. The purpose of the surveys was to evaluate the site based on existing conditions, with particular focus on the potential for native vegetation and special-status species within the BSA. The BSA includes the entire proposed ground disturbance area associated with the basin and a small buffer. All plant and animal species observed or otherwise detected in the BSA are summarized in Appendices A and B, respectively.

Plant communities and subcommunities were determined in general accordance with categories set forth in *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Vegetation communities were mapped on an orthographically corrected 1-inch (in) = 100 feet (ft) aerial photograph. Habitat areas that were considered too small to map separately were included in nearby habitat types determined to be the most appropriate based on species composition.

The surveys were floristic in nature, and all vascular plant species encountered in the BSA were identified, not just special-interest plants. Plant nomenclature follows that of *The Jepson Manual, Higher Plants of California* (Hickman 1993). All plant species observed during the surveys were noted and are included in Appendix A.

2.2.3. Wildlife Surveys

2.2.3.1. Focused Coastal California Gnatcatcher Surveys

LSA biologist Richard Erickson conducted three protocol surveys on March 27 and April 3 and 9, 2009, at Basin 780R. Potential coastal California gnatcatcher (CAGN) (*Poliophtila californica californica*) habitat is located on the cut slopes and natural hillsides across the connector road from Basin 780R, within the area of direct effects. These modified surveys primarily covered this area. The protocol surveys were conducted pursuant to LSA's Federal Fish and Wildlife Permit No. TE-777965-8

(expires April 17, 2012) and a temporary authorization from CDFG (May 12, 2003–March 31, 2007; renewal request submitted March 26, 2007, extending coverage indefinitely) in lieu of an MOU between LSA and CDFG.

The protocol surveys (modified February 12, 2009, due to USFWS coordination) for the CAGN were performed only at Basin 780R because there is CSS located within the area of direct effects at this location. Surveys were conducted in accordance with protocol pursuant to permit requirements. All wildlife species observed during the general and focused surveys were noted and are included in Appendix B. Copies of the CAGN focused report are included in Appendix C.

2.2.4. Jurisdictional Delineation

A copy of the Jurisdictional Delineation Report is included in Appendix D. The fieldwork for this evaluation was conducted by LSA biologists Corey Knips, Ingri Quon, Angela Roundy, and Leo Simone. The fieldwork was conducted on November 5, 6, 7, 10, and 18, 2008. The study area was surveyed on foot for both federal and State jurisdictional areas.

Areas of potential jurisdiction were evaluated according to USACE, CDFG, and RWQCB criteria. The boundaries of the potential jurisdictional areas were observed in the field and mapped on 26 aerial photographs (with a scale of 1 in = approximately 300 ft), which together show the entire study area. Measurements of federal and State jurisdictional areas mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs.

Areas supporting species of plant life potentially indicative of wetlands were evaluated according to routine wetland delineation procedures described in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Supplement) (USACE 2006) and the Corps of Engineers 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory 1987). Representative sample plots were selected and examined in the field in those areas where wetland jurisdiction was in question or needed to be confirmed. The locations of sample plots and the potential jurisdictional areas are shown on figures in Appendix A of the Jurisdictional Delineation Report. At each sample plot, the dominant and subdominant plant species were identified and their wetland indicator status noted (Reed 1988). A small sample pit (approximately 24 in deep) was dug at

each plot in order to examine soil characteristics and composition. Soil matrix colors were classified according to the Munsell Soil Color Charts (Munsell Color 2000). Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators, were noted. General site characteristics were also noted. Standard data forms were completed for each sample plot; copies of these data forms are included in Appendix B of the Jurisdictional Delineation Report. Potential USACE, CDFG, and RWQCB jurisdictional and nonjurisdictional areas within the project area are presented in Table A in Appendix C of the Jurisdictional Delineation Report. Representative site photos are located in Appendix D of the Jurisdictional Delineation Report.

2.3. Personnel and Survey Dates

Table 2.1 lists the surveys completed and the personnel utilized for the surveys.

Table 2.1 Surveys Conducted and Personnel Utilized

Survey Type	Dates	Consultant Biologist(s)
Biological Reconnaissance Survey, Vegetation Mapping	November, 7 and 18, 2008; and April 15, 2009	Elizabeth Delk, Corey Knips, Ingri Quon, Leo Simone, Arianne Preite and Lesley Hill
Focused Coastal California Gnatcatcher Surveys	March 27, April 3 and 9, 2009	Richard Erickson
Jurisdictional Delineation	November 5, 6, 7, 10, and 18, 2008	Corey Knips, Ingri Quon, Angela Roundy, and Leo Simone

2.4. Agency Coordination and Professional Contacts

Per an email conversation between Lesley Hill (Caltrans) and Sally Brown (USFWS), an agreement was made on February 12, 2009, to modify protocol surveys for CAGN to three surveys (instead of six) during the breeding season. Further coordination via e-mail with Sally Brown on May 4, 2009 confirmed that the proposed project impacts would not require any further coordination with USFWS.

A field review for the jurisdictional delineation was conducted on January 22, 2009. Participants included Charles Baker (Caltrans), Jae Chung (USACE), Lesley Hill (Caltrans), Sophia Huynh (USACE), and Leo Simone (LSA).

An email was received by Lesley Hill (Caltrans) from Sophia Huynh (USACE) on April 27, 2009, asserting jurisdiction over four of the basins along SR-73, including Basin 765L, the subject of this NES. A formal jurisdictional determination from the

USACE was dated March 20, 2009 and was received by Caltrans, District 12 (Appendix G). Basins 506R, 1081L and 1080R were also considered jurisdictional by the USACE and were covered under a separate NES(MI).

An e-mail was received by Lesley Hill (Caltrans) from Pam Beare (CDFG) on May 26, 2009, confirming that the proposed project activities will not require a SAA.

2.5. Limitations That May Influence Results

The collection of biological field data is normally subject to environmental factors that cannot be controlled or reliably predicted. Consequently, the interpretation of field data must be conservative and must consider the uncertainties and limitations necessarily imposed by the environment. However, due to the experience and qualifications of the consultant biologists involved in the surveys, this limitation is not expected to substantially influence the results or alter the findings.

Chapter 3. Results: Environmental Setting

3.1. Description of the Existing Biological and Physical Conditions

As described in *The Jepson Manual* (Hickman, J.C., ed. 1993), the proposed project area is located within the South Coast subregion of the Southwestern California region of the California Floristic Province. The South Coast subregion is characterized by valleys and small hills extending from the coast inland to the foothills of the Transverse and Peninsular Mountain Ranges. Much of the area is intensively developed for urban, suburban, and agricultural uses. The natural vegetation of the subregion consists primarily of chaparral, CSS, annual grasslands, and some riparian scrub and woodland. Much of the natural vegetation occurs in scattered, often fragmented patches on hills or in other areas not easily developed. Specifically, the proposed project is located in the Cities of Irvine and Laguna Beach in Orange County, California.

3.1.1. Study Area

The project area lies within the southeastern portion of the City of Irvine and the northwestern portion of the City of Laguna Beach. The proposed project is located along SR-73, with some areas of revegetated or naturally occurring CSS and riparian habitat, surrounded by portions of urban development and ornamental landscaping.

3.1.2. Physical Conditions

There are a variety of vegetation communities located within the study area, including riparian habitat, CSS, chaparral, ruderal/disturbed vegetation, and developed/ornamental vegetation. The riparian communities include Arroyo willow riparian forest and cattail marsh (*Typha* spp.).

Elevations range from approximately 280 to 920 ft above mean sea level (amsl) across the entire study area. The topography is gentle to steep rolling hills adjacent to SR-73, with steep canyons and hillsides.

3.1.3. Biological Conditions in the Biological Study Area

The following sections summarize the principal characteristics and general locations of invasive plant species, general wildlife, and aquatic resources within the BSA. Representative site photographs of the BSA are provided in Appendix E. Appendix F includes the biological resource maps, which indicate the existing vegetation communities within the BSA. Appendices A and B reference the plant and wildlife species observed, respectively.

3.1.3.1. Plant Communities and Habitat Types

Seven vegetation communities were identified within the BSA and are shown on the biological resources figure in Appendix F. Several of the areas contain a mixture of these vegetation communities.

Coastal Sage Scrub

Species within this plant community include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), California encelia (*Encelia californica*), coastal deerweed (*Lotus scoparius* var. *scoparius*), and bush monkey flower (*Mimulus aurantiacus*). Although there is no CSS located within any of the basins, there is CSS located within the area of direct effects at Basin 780R and adjacent to Basins 765L and 878R.

Chaparral

The chaparral plant community primarily occurs adjacent to Basin 780R. Within the project area, the chaparral vegetation appears to be planted. Species within this plant community include laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), lemonade berry (*Rhus integrifolia*), white sage (*Salvia apiana*), California sagebrush, and California buckwheat.

Arroyo Willow Riparian Forest

This plant community primarily occurs in Basin 765L. Plants within this habitat type include Arroyo willow (*Salix lasiolepis*), western sycamore (*Platanus racemosa*), mulefat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), yellow sweetclover (*Melilotus indica*), and tree tobacco (*Nicotiana glauca*).

Cattail Marsh

This plant community primarily occurs in Basin 765L. The dominant plant species within this habitat type is cattails. There are few other associated species in this plant

community, since cattails grow in dense thickets and preclude other plant species from colonizing.

Ruderal Vegetation/Disturbed Habitat

This plant community consists predominantly of ruderal and unmaintained or escaped ornamental vegetation. Plants within this habitat type include tocalote (*Centaurea melitensis*), Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), common sow-thistle (*Sonchus oleraceus*), shortpod mustard (*Hirschfeldia incana*), bare barley (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Lolium multiflorum*), red-stemmed filaree (*Erodium cicutarium*), common wild oat (*Avena fatua*), foxtail chess (*Bromus madritensis* ssp. *rubens*), garland chrysanthemum (*Chrysanthemum coronarium*), and sweet-alyssum (*Lobularia maritima*).

Developed Areas/Ornamental Vegetation

This "habitat" consists of developed areas such as existing paved roads and ornamental vegetation. Plants within this habitat include western sycamore, miniature lupine (*Lupinus bicolor*), coast live oak (*Quercus agrifolia* var. *agrifolia*), garland chrysanthemum and toyon.

Bareground

This habitat consists of areas with highly compacted soils and little to no vegetation, including cleared or graded areas or dirt access roads and trails.

3.2. Regional Species and Habitats of Concern

The San Joaquin Hills are a fairly rugged coastal hill system. Most of these hills are wildlands consisting of regional habitats of CSS, chaparral, and annual grassland communities. Information based on the literature review for the special-status species within the BSA is presented below. Species that require additional surveys and analysis are addressed in Chapter 4 of this NES.

3.2.1. Plants

The BSA supports suitable habitat for a variety of special-status plant species. The project area contains important biological resources within an urban environment. After a thorough literature review, it was determined that a total of 40 special-status plant species have the potential to occur on or within the vicinity of the BSA. Eight of

the 40 special-status plant species are federally and/or State-listed endangered, threatened, or candidate species. Further information on these species, including their status, habitat requirements, and potential for occurrence, is summarized in Table 3.1 below.

3.2.2. Wildlife

The BSA supports suitable habitat for a variety of special-status wildlife species. After a thorough literature review, it was determined that 62 special-status wildlife species have the potential to occur within the BSA. A total of 12 of these species are federally and/or State-listed endangered or threatened, or proposed endangered or threatened, or are considered fully protected species by the State of California. Further information on these species, including their status, habitat requirements, and potential for occurrence, is summarized in Table 3.2 below.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>	CSP CNPS: List 1B.1	Annual herb. Occurs in coastal scrub and chaparral in sandy soils from 260 to 5,250 ft in elevation.	January–August	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Aphanisma	<i>Aphanisma bifolides</i>	CSP CNPS: List 1B.2	Annual herb. Occurs in coastal bluff scrub, coastal dunes, and coastal scrub in sandy or clay soils up to 915 ft in elevation.	March–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Coulter's saltbush	<i>Atriplex coulteri</i>	CSP CNPS: List 1B.2	Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland usually on ocean bluffs and ridge tops in alkaline or clay soils. From 10 to 1,510 ft in elevation.	March–October	765L: HP 780R: HP 878R: HP	Limited habitat for this species is present on site. Not observed during surveys.
South Coast saltscale	<i>Atriplex pacifica</i>	CSP CNPS: List 1B.2	Annual herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland in alkaline or clay soils. From 9 to 1,380 ft in elevation.	March–October	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Parish's brittlescale	<i>Atriplex parishii</i>	CSP CNPS: List 1B.1	Annual herb that occurs in chenopod scrub, vernal pools, and playas, usually on drying alkali flats with fine soils. From 10 to 6,230 ft in elevation.	June–October	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	CSP CNPS: List 1B.2	Annual herb. Occurs in coastal bluff scrub and coastal scrub, usually in alkaline soil. From 35 to 660 ft in elevation.	April–October	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT, CE, CSP CNPS: List 1B.1	Bulbiferous perennial herb. Occurs primarily in vernal pools, but also found in chaparral, cismontane woodlands, coastal scrub, playas, and valley and foothill grasslands, usually in clay soils. From 115 to 4,003 ft in elevation.	March–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Tecate cypress	<i>Callitropsis</i> (formerly <i>Cupressus</i>) <i>forbesii</i>	CSP CNPS: List 1B.1	Perennial evergreen tree. Occurs in closed-cone coniferous forest and chaparral. From 835 to 4,920 ft in elevation.	N/A	765L: A 780R: A 878R: A	No suitable habitat is present on site. Not observed during surveys.
Intermediate mariposa lily	<i>Calochortus weedii</i> var. <i>intermedius</i>	CSP CNPS: List 1B.2	Perennial bulbiferous herb. Occurs in chaparral, coastal scrub, and valley and foothill grassland. Often in dry, rocky soils. From 395 to 2,805 ft in elevation.	May–July	765L: A 780R: A 878R: A	Suitable habitat for this species is present on site. Not observed during surveys.
Lewis' evening-primrose	<i>Camissonia lewisii</i>	CSP CNPS: List 3	Annual herb. Occurs in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland. Often in sandy or clay soils up to 900 ft in elevation.	March–May (June) ¹	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Southern tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>	CSP CNPS: List 1B.1	Annual herb. Occurs in vernal pools, margins of marshes and swamps, and vernal mesic valley and foothill grasslands, sometimes with saltgrass on alkaline soils. Up to 1,400 ft in elevation.	May–November	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Orcutt's pincushion	<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	CSP CNPS: List 1B.1	Annual herb. Occurs in coastal bluff scrub and coastal dunes. From 9 to 300 ft in elevation.	January–August	765L: A 780R: A 878R: A	Limited habitat for this species is present on site for Basins 765L and 780R. No suitable habitat for Basin 878R due to elevation. Not observed during surveys.
San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC, CE, CSP CNPS: List 1B.1	Annual herb. Occurs in coastal scrub in sandy soils. From 450 to 3,660 ft in elevation.	April–July	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Summer holly	<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	CSP CNPS: List 1B.2	Perennial evergreen shrub. Occurs in chaparral and cismontane woodland. From 90 to 1,650 ft in elevation.	April–June	765L: A 780R: A 878R: A	No suitable habitat is present on site. Not observed during surveys.
Salt marsh bird's beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE, CE, CSP CNPS: List 1B.2	Annual hemiparasitic herb. Occurs in coastal dunes and salt marshes. Up to 90 ft in elevation.	May–October	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE, CE, CSP CNPS: List 1B.1	Annual herb. Occurs in chaparral, cismontane woodland, and coastal scrub in alluvial or sandy soils. From 600 to 2,280 ft in elevation.	April–June	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.
Blochman's dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	CSP CNPS: List 1B.1	Perennial herb. Occurs in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland often in rocky, clayey, or serpentine soils. From 15 to 1,350 ft in elevation.	April–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Many-stemmed dudleya	<i>Dudleya multicaulis</i>	CSP CNPS: List 1B.2	Perennial herb. Occurs in chaparral, coastal scrub, and valley and foothill grassland usually in heavy, often clayey soils. From 45 to 2,370 ft in elevation.	April–July	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Laguna Beach dudleya	<i>Dudleya stolonifera</i>	FT, CT, CSP CNPS: List 1B.1	Perennial stoloniferous. Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland often in thin soil on north-facing sandstone cliffs. From 30 to 780 ft in elevation.	May–July	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.
Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE, CE, CSP CNPS: List 1B.1	Perennial herb. Occurs in chaparral and coastal scrub in sandy soils on river floodplains or terraced fluvial deposits. From 273 to 1,830 ft in elevation.	May–September	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.
Cliff spurge	<i>Euphorbia misera</i>	CSP CNPS: List 2.2	Perennial shrub. Occurs in coastal bluff scrub, coastal scrub, and Mojavean desert scrub in rocky soils or along cliffs. From 30 to 1,500 ft in elevation.	December–August	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.
Los Angeles sunflower	<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	CSP CNPS: List 1A	Perennial rhizomatous herb. Occurs in coastal salt and freshwater marshes and swamps. From 30 to 5,025 ft in elevation.	August–October	765L: HP 780R: A 878R: A	Suitable habitat for this species is present on site. Not observed during surveys.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Vernal barley	<i>Hordeum intercedens</i>	CSP CNPS: List 3.2	Annual herb. Occurs in coastal dunes, coastal scrub, vernal pools, and valley and foothill grassland. From 15 to 3,000 ft in elevation.	March–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Mesa horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	CSP CNPS: List 1B.1	Perennial herb. Occurs in chaparral, cismontane woodland, and coastal scrub in sandy or gravelly soils. From 210 to 2,430 ft in elevation.	February– July (September)	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Decumbent goldenbush	<i>Isocoma mensiesii</i> var. <i>decumbens</i>	CSP CNPS: List 1B.2	Perennial shrub. Occurs in chaparral and coastal scrub in sandy and often disturbed areas. From 30 to 405 ft in elevation.	April– November	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Coulter's goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	CSP CNPS: List 1B.1	Annual herb occurring in coastal salt marshes and swamps, playas, valley and foothill grasslands, sinks, and vernal pools up to 3,660 ft in elevation.	February– June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Mud nama	<i>Nama stenocarpum</i>	CSP CNPS: List 2.2	Annual to perennial herb. Occurs in marshes and swamps and along lake margins and riverbanks. From 15 to 1,640 ft in elevation.	January– July	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Gambel's water cress	<i>Nasturtium gambelii</i>	FE, CT, CSP CNPS: List 1B.1	Perennial rhizomatous herb. Occurs in freshwater or brackish marshes and swamps and at the margins of lakes and along streams. From 15 to 990 ft in elevation.	April– October	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Prostrate vernal pool navarretia	<i>Navarretia prostrata</i>	CSP CNPS: List 1B.1	Annual herb. Occurs in coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and mesic vernal pools. From 45 to 2,100 ft in elevation.	April–July	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Coast woolly-heads	<i>Nemacaulis denudata</i> var. <i>denudata</i>	CSP CNPS: List 1B.2	Annual herb. Occurs in coastal dunes up to 300 ft in elevation.	April– September	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site. Not observed during surveys.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Peninsular nolina	<i>Nolina cismontana</i>	CSP CNPS: List 1B.2	Perennial evergreen shrub. Occurs in chaparral and coastal scrub on sandstone or gabbro soils. From 420 to 3,825 ft in elevation.	May–July	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Allen's pentachaeta	<i>Pentachaeta aurea</i> ssp. <i>allenii</i>	CSP CNPS: List 1B.1	Annual herb. Occurs in coastal scrub openings and valley and foothill grassland. From 225 to 1,560 ft in elevation.	March–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
White rabbit-tobacco	<i>Pseudognaphalium leucocephalum</i>	CSP CNPS: List 2.2	Perennial herb. Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland on sandy and gravelly soils below 7,000 ft elevation.	August– November (July– December)	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Nuttall's scrub oak	<i>Quercus dumosa</i>	CSP CNPS: List 1B.1	Perennial evergreen shrub. Occurs in closed-cone coniferous forest, chaparral, and coastal scrub in sandy, clay loam soils. From 45 to 1,200 ft in elevation.	February– April	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Sanford's arrowweed	<i>Sagittaria sanfordii</i>	CSP CNPS: List 1B.2	Emergent rhizomatous perennial herb. Occurs in assorted shallow freshwater marshes and swamp up to 1,950 ft in elevation.	May– October	765L: HP 780R: A 878R: A	Suitable habitat for this species is present on site. Not observed during surveys.
Chaparral ragwort	<i>Senecio aphanactis</i>	CSP CNPS: List 2.2	Annual herb. Occurs in chaparral, cismontane woodland, and coastal scrub on drying alkaline flats. Elevations from 45 to 2,400 ft.	January– April	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Salt spring checkerbloom	<i>Sidalcea neomexicana</i>	CSP CNPS: List 2.2	Perennial herb. Occurs in coastal scrub, chaparral, lower montane coniferous forest, brackish marshes, Mojavean desert scrub, and playas on alkaline, mesic soils. From 45 to 4,590 ft in elevation.	March–June	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.

Table 3.1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Estuary seablite	<i>Suaeda esteroa</i>	CSP CNPS: List 1B.2	Perennial herb. Occurs in coastal salt marshes and swamps up to 15 ft in elevation.	May–October (January) ¹	765L: A 780R: A 878R: A	No suitable habitat for this species is present on site due to elevation. Not observed during surveys.
San Bernardino aster	<i>Symphyotrichum defoliatum</i>	CSP CNPS: List 1B.2	Perennial rhizomatous herb. Occurs in dismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland, usually near ditches, streams, and springs. From 6 to 6,120 ft in elevation.	July–November	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site. Not observed during surveys.
Big-leaved crownbeard	<i>Verbesina dissita</i>	FT, CT, CSP CNPS: List 1B.1	Perennial herb. Occurs in southern maritime chaparral and coastal scrub from 135 to 615 ft in elevation along the immediate coast.	April–July	765L: A 780R: A 878R: A	Limited habitat for this species is present on site. Site removed from typical distribution along Laguna Beach Coast. Not observed during surveys.

¹ Months in parentheses are uncommon.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); California Endangered (CE); California Threatened (CT); California Fully Protected Species (CFP); California Special Plant (CSP), California Native Plant Society (CNPS); etc.

California Native Plant Society (CNPS) designations:

- List 1A: Plants presumed extinct in California
- List 1B: Plants rare and endangered in California and throughout their range
- List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range
- List 3: Plants needing more information (a review list)
- List 4: Plants of limited distribution (a watch list)

Habitat Present/Absent: Absent (A) – No habitat is present and no further work is needed, OR habitat is absent or species was absent within the BSA at the time of the focused survey; Habitat Present (HP) – Habitat is or may be present; Species Present (O) – The species was observed within the BSA at the time of the survey; Critical Habitat (CH) – Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

BSA = Biological Study Area

ft = feet

N/A = Not available

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
INVERTEBRATES					
Western tidal-flat tiger beetle	<i>Cicindela gabbii</i>	CSA	Generally found on dark-colored mud in the lower zone and on dry, saline flats of estuaries along the coast of Southern California.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Sandy beach tiger beetle	<i>Cicindela hirticollis gravida</i>	CSA	Inhabits clean, dry, light-colored sand in the upper zone adjacent to nonbrackish water along the coast of California from San Francisco Bay to northern Mexico.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Western beach tiger beetle	<i>Cicindela latesignata latesignata</i>	CSA	Found on mudflats and beaches in coastal Southern California.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Globose dune beetle	<i>Coelus globosus</i>	CSA	Inhabits foredunes and sand hummocks in sand dune habitat and is most common beneath dune vegetation. Occurs from Bodega Head in Sonoma County South to Ensenada, Mexico.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Monarch butterfly (winter roost sites)	<i>Danaus plexippus</i>	CSA	Roosts in wind-protected tree groves of eucalyptus, Monterey pine and cypress with water sources nearby. Occurs along the coast from northern Mendocino County to Baja California, Mexico.	765L: A 780R: A 878R: A	No suitable over-wintering habitat for this species is present in the BSA.
Mimic tryonia	<i>Tryonia imitator</i>	CSA	Inhabits coastal lagoons, estuaries, and salt marshes from Sonoma County to San Diego County. Found only in permanently submerged areas in a variety of sediment types.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
FISH					
Santa Ana sucker	<i>Catostomus santaanae</i>	FT, SSC	Endemic to the Los Angeles Basin south coastal streams. It is usually found in fresh water with sand-rubble or boulder bottoms.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Tidewater goby	<i>Eucyclogobius newberryi</i>	FE, SSC	Found in shallow lagoons and lower stream reaches in brackish water habitats. Occurs along the California coast from the mouth of the Smith River to San Diego County.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Arroyo chub	<i>Gila orcuttii</i>	SSC	Occurs in slow-water stream sections with mud or sand bottoms in the Los Angeles Basin south coastal streams.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
Santa Ana speckled dace	<i>Rhinichthys osculus</i>	SSC	Occurs in headwaters of the Santa Ana and San Gabriel Rivers and may be extirpated from the Los Angeles River system. Requires permanent flowing streams with cobble and gravel riffle complexes.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
AMPHIBIANS					
Western spadefoot	<i>Spea hammondi</i>	SSC	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 feet. Requires temporary pools for breeding.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present within the BSA.
Arroyo toad	<i>Bufo californicus</i>	FE, SSC	Found in semi-arid regions near washes or intermittent streams. Often found near streams with sandy banks, gravel washes, and riparian vegetation.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
REPTILES					
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	SSC	Occurs in a variety of habitats, including woodland, grassland, and open forest. Thoroughly aquatic, existing in good-quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	765L: HP 780R: A 878R: A	Limited suitable habitat for this species is present on site at Basin 765L. This species is not expected to occur at Basins 780R and 878R.
California legless lizard	<i>Anniella pulchra pulchra</i>	SSC	Frequents loose soil and humus of relatively open habitats. Susceptible to drying, and lives only where it can reach damp soil.	765L: HP 780R: HP 878R: HP	Marginally suitable habitat is present within the BSA.
San Bernardino ringneck snake	<i>Lampropeltis zonata pulchra</i>	CSA	Found under surface objects along drainage courses, in mesic chaparral and oak and walnut woodland communities.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present within the BSA.
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>	SSC	Occurs in CSS, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	765L: HP 780R: HP 878R: HP	Habitat in the BSA is marginally suitable.
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	SSC	Inhabits low-elevation coastal scrub, chaparral, and valley hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food, termites.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present within the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Coastal western whiptail	<i>Aspidoscelis tigris stejnegeri</i>	CSA	Occurs in deserts and semiarid areas with sparse vegetation. Often found in woodland and riparian areas.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present within the BSA.
Rosy boa	<i>Charina trivirgata</i>	CSA	Inhabits rock outcrops and rocky shrublands in the southwestern United States and western Mexico.	765L: HP 780R: HP 878R: HP	Limited suitable habitat for this species is present within the BSA, but is marginal.
Northern red-diamond rattlesnake	<i>Crotalus ruber ruber</i>	SSC	Associated with chaparral, woodland, grassland, and desert communities from Los Angeles County to Baja California Sur. Prefers rocky areas with dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects for shelter.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present within the BSA.
Two-striped garter snake	<i>Thamnophis hammondi</i>	SSC	Highly aquatic. Found in or near permanent fresh water. Often found along streams with rocky beds and riparian growth.	765L: HP 780R: A 878R: A	Limited suitable habitat for this species is present at Basin 765L. This species is not expected to occur at Basins 780R and 878R.
Coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	SSC	Occupies desert scrub, coastal chaparral, washes, sandy flats, and rocky areas.	765L: HP 780R: HP 878R: HP	Limited suitable habitat for this species is present within the BSA, but is marginal.
BIRDS					
Cooper's hawk (nesting)	<i>Accipiter cooperii</i>	CSA	Nests in a wide variety of woodland and forest habitats.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is available within the BSA; however, no nesting habitat is present on site.
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	CSA	Resident in Southern California CSS and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site.
Grasshopper sparrow (nesting)	<i>Ammodramus savannarum</i>	SSC	Occurs in dense grasslands, preferring native grasslands with a mixture of forbs and shrubs.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Great blue heron (nesting)	<i>Ardea herodias</i>	CSA	Nests in tall trees in close proximity to foraging areas, marshes, lake margins, tide flats, rivers and streams, and wet meadows. Colonial nester.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is available within the BSA; however, no nesting habitat is present on site.
Burrowing owl (burrow sites)	<i>Athene cucularia</i>	SSC	Burrows in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	765L: HP 780R: HP 878R: HP	Limited suitable habitat for this species is present within the BSA.
Ferruginous hawk	<i>Buteo regalis</i>	CSA	Found in open country in western North America; migrates north to Canada in summer and south to Mexico in winter.	765L: A 780R: A 878R: A	No suitable habitat for this species is present within the BSA.
Costa's hummingbird	<i>Calypte costae</i>	CSA	Primarily found in deserts, arid brushy foothills, and chaparral in the southwestern United States and northwestern Mexico.	765L: HP, O 780R: HP 878R: HP	Observed at Basin 765L in 2008. Suitable habitat for this species is present at Basins 780R and 878R.
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandlegensis</i>	SSC	Occurs in CSS habitats. Requires tall <i>Opuntia</i> cactus for nesting and roosting.	765L: HP 780R: A 878R: HP	Suitable foraging habitat for this species is present adjacent to the BSA at Basins 765L and 878R. No nesting habitat is present within the BSA.
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	CSA	Found in oak woodland chaparral, riparian woodland, and other habitats in arid regions, but usually occurs near water; occurs from northern California to northern Baja California, but periodically found wandering throughout much of western North America.	765L: HP 780R: HP 878R: HP	Marginally suitable habitat for this species is present on site.
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FE, SSC, CSA	Occurs in sandy beaches, salt pond levees and shores of large alkali lakes; needs sandy, gravelly, or friable soils for nesting.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Lark sparrow	<i>Chondestes grammacus</i>	CSA	Found in open situations with scattered bushes or trees. Breeds throughout much of western North America and winters from the southern United States to southern	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
Yellow warbler	<i>Dendroica petechia</i>	SSC	Mexico. Occurs in riparian woodland while nesting in the western U.S. and northwestern Baja California; more widespread in brushy areas and woodlands during migration and winter, when it occurs from western Mexico to northern South America.	765L: HP 780R: A 878R: A	Suitable nesting habitat for this species is present at Basin 765L.
White-tailed kite	<i>Elanus leucurus</i>	CFP, CSA	Breeds in riparian trees such as oaks, willows, and cottonwoods in lower-elevation areas, particularly coastal valleys and plains.	765L: HP 780R: HP 878R: HP	Suitable breeding habitat for this species is present at Basin 765L. Suitable foraging habitat is available within the BSA.
California horned lark	<i>Eremophila alpestris actia</i>	CSA	Occurs in open grasslands, farmlands, prairies, tundras, airports, beaches, golf courses, cemeteries, and parks.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Merlin	<i>Falco columbarius</i>	CSA	Found in open country; breeds in the Holarctic Region and winters south to the tropics.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site.
Yellow-breasted chat (nesting)	<i>Icteria virens</i>	SSC	Summer resident of California. Inhabits riparian thickets of willow and other brushy tangles near water. Nests in low, dense vegetation consisting of willow, blackberry, and wild grape.	765L: HP 780R: A 878R: A	Suitable nesting habitat for this species is present at Basin 765L.
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC	Occurs in open country in much of North America, but is declining in many areas, including southwestern California	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present on site.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	CT, CSA	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Osprey (nesting)	<i>Pandion haliaetus</i>	CSA	Occurs in ocean shores, bays, freshwater lakes, and larger streams. Nests built in treetops within 15 miles of a fish-producing body of water.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.
Belding's Savannah sparrow	<i>Passerculus sandwichensis beldingi</i>	CE	Inhabits coastal salt marshes from Santa Barbara through San Diego County. Nests in <i>Salicornia</i> on and about the margins of tidal flats.	765L: A 780R: A 878R: A	No suitable habitat for this species is present in the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
Nuttall's woodpecker	<i>Picoides nuttallii</i>	CSA	Found in oak, pine-oak, and riparian woodland in California and northwestern Baja California.	765L: HP 780R: HP, O 878R: A	Observed during 2009 CAGN focused surveys at Basin 765L. Suitable habitat is present at Basin 765L.
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT, SSC	Obligate, permanent resident of CSS below 2,500 feet in elevation in Southern California.	765L: HP 780R: HP 878R: HP	CSS habitat is located adjacent to the BSA at Basins 765L and 878L. Observed during 2008 surveys along the BSA.
Light-footed clapper rail	<i>Rallus longirostris levipes</i>	FE, CE, CSA	Found in salt marshes traversed by tidal sloughs where cordgrass and pickleweed are the dominant vegetation.	765L: A 780R: A 878R: A	No suitable habitat is present within the BSA.
Allen's hummingbird	<i>Selasphorus sasin</i>	CSA	Found in chaparral, open oak woodland, riparian woodland, and residential areas on the breeding grounds from southwestern Oregon to southwestern California.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is present within the BSA.
California least tern	<i>Sterna antillarum browni</i>	FE, CE, CSA	Nests along the coast from San Francisco Bay to northern Baja California. Breeds on bare or sparsely vegetated, flat substrates such as sand beaches, alkali flats, landfills, or paved areas.	765L: A 780R: A 878R: A	No suitable habitat is present within the BSA.
Least Bell's vireo (nesting)	<i>Vireo bellii pusillus</i>	FE, CE	Occurs in moist thickets and riparian areas that are predominantly composed of willow and mulefat.	765L: HP 780R: A 878R: A	Suitable nesting habitat for this species is present at Basin 765L.
MAMMALS					
Pallid bat	<i>Antrozous pallidus</i>	SSC	Found in varied habitats in western North America.	765L: A 780R: A 878R: A	No suitable foraging habitat is present within the BSA.
Dulzura pocket mouse	<i>Chaetodipus californicus femoralis</i>	SSC	Occurs in a variety of habitats, including coastal scrub, chaparral, and grassland and is attracted to grass-chaparral edges in San Diego County. May be outside the subspecies' range.	765L: HP 780R: HP 878R: HP	Suitable habitat for this species is present in the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	SSC	Occasionally found in San Diego County. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves as well as in and around buildings.	765L: A 780R: A 878R: A	Although limited suitable habitat structure is present on site, the BSA is outside of the known range of this species. This species is not expected to occur within the BSA.
Western mastiff bat	<i>Eumops perotis californicus</i>	SSC	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral communities. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	765L: HP 780R: HP 878R: HP	There is a limited amount of suitable roosting habitat present within the BSA. Foraging individuals wander widely.
Western red bat	<i>Lasiurus blossevillii</i>	CSA	Forages over a wide range of habitats, but generally roosts in woodlands and forests. Ranges from southwestern Canada through the western United States and Middle America to South America.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is present within the BSA; roosting habitat is present at Basin 765L.
Hoary bat	<i>Lasiurus cinereus</i>	CSA	Forages over a wide range of habitats, but prefers open habitats with access to trees for roosting, and water. Ranges throughout most of California.	765L: HP 780R: HP 878R: HP	Limited suitable habitat for this species is present within the BSA.
Southwestern yellow bat	<i>Lasiurus xanthinus</i>	CSA	Occurs in varied habitats, but usually near water; often associated with palm trees. Ranges from the southwestern United States to southern Mexico.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is present within the BSA; roosting habitat is present at Basin 765L.
Wester small-footed myotis	<i>Myotis ciliolabrum</i>	CSA	Occurs in varied habitats throughout much of North America.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is present within the BSA.
Yuma myotis	<i>Myotis yumanensis</i>	CSA	Common and widespread in California. Found in a wide variety of habitats in elevations ranging from sea level to 11,000 feet. Optimal habitats are open forests and woodlands with sources of water over which to feed.	765L: HP 780R: HP 878R: HP	Suitable foraging habitat is present within the BSA.
Big free-tailed bat	<i>Nyctinomops macrotis</i>	SSC	Primarily occurs in arid habitats from the southwestern U.S. to South America, but has been recorded far "out of range" during migration. Roost sites include cliffs, buildings, and hollow trees.	765L: HP 780R: HP 878R: HP	There is a limited amount of suitable habitat present within the BSA.

Table 3.2 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	SSC	Occurs in CSS and chaparral; most commonly associated with cactus and rocky cliffs and slopes. Found in coastal Southern California from San Diego County to San Luis Obispo County.	765L: HP 780R: HP 878R: HP	Suitable habitat is present within the BSA.
Pacific pocket mouse	<i>Perognathus longimembris pacificus</i>	FE, SSC, CSA	Inhabits friable soils along the narrow coastal plains from the northern Mexican border to Los Angeles County.	765L: A 780R: A 878R: A	No suitable habitat is present within the BSA.
Southern California saltmarsh shrew	<i>Sorex ornatus salicomicus</i>	SSC	Inhabits coastal marshes in Los Angeles, Orange, and Ventura Counties. Requires dense vegetation and woody debris for cover.	765L: A 780R: A 878R: A	No suitable habitat is present within the BSA.
American badger	<i>Taxidea taxus</i>	CSA	Occurs throughout much of North America. Primary habitat requirements seem to be sufficient food and friable soils in relatively open, uncultivated ground in grasslands, woodlands, and deserts.	765L: A 780R: A 878R: A	No suitable habitat is present within the BSA.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Delisted (FD); California Endangered (CE); California Threatened (CT); California Species of Special Concern (SSC); California Fully Protected Species (CFP); California Special Plant (CSP), California Special Animal (CSA)

Habitat Present/Absent: Absent (A) – No habitat is present and no further work is needed; Habitat Present (HP) – Habitat is or may be present; Species Present (O) – The species was observed within the BSA during surveys; Critical Habitat (CH) – The project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

BSA = Biological Study Area

CSS = coastal sage scrub

Chapter 4. Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1. Natural Communities of Special Concern

Habitats are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals occurring on site. LSA biologists identified two primary plant community groups that are considered important by State and/or local agencies. These communities occur with varied abundance on site. Each sensitive habitat identified within the proposed project boundaries is described in more detail below and is shown on the Biological Resources Maps in Appendix F. Wetlands and waters of the United States are also considered sensitive by both federal and State agencies and are discussed in more detail in Section 5.3, Wetlands and Other Waters Coordination Summary.

Two general natural community groups of special concern were identified within the BSA: riparian/riverine habitats and CSS.

4.1.1. Discussion of Natural Community Riparian/Riverine Habitats

Riparian habitats such as those found within the BSA were formerly abundant along major rivers of coastal Southern California but are now significantly reduced by urban expansion, flood control, and channel "improvements" (Holland 1986). The typical association of these riparian habitat types with drainages means that they are "protected" under the California Fish and Game Code and, to a certain extent, by the CWA. These habitats are considered high-quality wildlife habitats because they provide protective cover, water, and food for a variety of species. Many animal species are riparian habitat obligates. Other animals, including large mammals, require access to water and use bands of riparian habitat as wildlife corridors. As such, the CDFG regulates riparian areas only to the extent that those areas are associated with the banks of a stream or lake shorelines.

4.1.1.1. Survey Results

There are two riparian Natural Communities of Special Concern within the BSA: Arroyo willow riparian forest and cattail marsh. These riparian communities primarily occur at Basin 765L.

4.1.1.2. Avoidance and Minimization Efforts

No avoidance or minimization measures were warranted because the proposed project is not expected to affect riparian habitat. The riparian/riverine habitat primarily occurs in Basin 765L, and no work is proposed to occur at this basin.

4.1.1.3. Project Impacts

The proposed project would result in no direct permanent or temporary impacts to riparian/riverine habitat through disturbance and/or removal of existing vegetation. The riparian/riverine habitat occurs in Basin 765L, and no work is proposed to occur at this basin.

4.1.1.4. Compensatory Mitigation

No compensatory mitigation is expected for riparian/riverine habitat, as the proposed project is not expected to affect this habitat.

4.1.1.5. Cumulative Impacts

No cumulative impacts are expected for riparian/riverine habitat, as the proposed project is not expected to affect this habitat.

4.1.2. Discussion of Natural Community Coastal Sage Scrub Habitat

CSS is generally a patchy vegetation community found in diverse habitat mosaics and is dominated by a suite of shrub species found in Southern California. Shrub cover is dense and generally continuous, with low moisture content. Steep, xeric slopes and quickly draining soils characterize the CSS community. Annual herbs, including weedy grasses and forbs and native wildflowers, are common in openings and disturbed areas.

CSS has become displaced by spreading urbanization. Many rare and endangered species occur in CSS and associated plant communities. Consequently, degradation and displacement of CSS has also resulted in substantial habitat loss for a variety of animal species. Therefore, CDFG and the USFWS have special concern for these

habitat types. CSS communities on site match the CSS vegetation communities described by Holland (1986).

4.1.2.1. Survey Results

This habitat type occurs primarily at Basin 780R and adjacent to Basins 765L and 878R. Specifically, CSS occurs on the northern slope across the Laguna Canyon Road off-ramp of Basin 780R. Although CSS occurs on this slope, deep erosional gullies have been carved into the slope face, leaving little viable soil for the CSS. Good quality CSS does occur at the top of this slope. CSS also occurs adjacent to the west of Basin 765L and adjacent to the north of Basin 878R (Appendix F). Although the area is disturbed, it is of good quality.

4.1.2.2. Avoidance and Minimization Efforts

The following measures will be incorporated to avoid and minimize impacts to CSS habitat:

- Design measures include a modified smaller impact area at the top of the slope at Basin 780R in order to reduce impacts to the CSS.
- Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around CSS adjacent to the project footprint to designate ESAs to be preserved. No grading or fill activity of any type will be permitted within these ESAs. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment will be operated in such a manner as to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.
- In order to avoid impacts to nesting birds, any native vegetation removal or tree (native or exotic) trimming activities will occur outside of the nesting season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer should be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

- Inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) would be employed should an invasion occur.
- A biologist will monitor all construction activities for the duration of the project in areas adjacent to ESA boundaries to flush any wildlife species present prior to construction and to ensure that vegetation removal, BMPs, ESAs, and all avoidance and minimization measures are properly adhered to.

4.1.2.3. Project Impacts

The proposed project is expected to potentially result in direct permanent and temporary impacts to CSS through disturbance and/or removal of existing vegetation. Approximately 0.50 ac of soil will be graded at Basin 780R. Of this 0.50 ac, approximately 0.04 ac (occurring at the top of the slope) is considered to be of good quality CSS. The face of this slope has low quality CSS due to an extended period of erosional activity. All impacts to this slope are considered temporary as the entire area will be re-established with CSS. CSS will also be impacted due to the extension of a concrete v-ditch (0.027 ac for permanent impacts and 0.18 ac for temporary impacts) at Basin 878R. No impacts are expected to CSS vegetation within Basin 765L. The proposed project would permanently impact a total of approximately 0.027 ac and temporarily impact approximately 0.518 ac of CSS.

4.1.2.4. Compensatory Mitigation

The CSS within the project boundaries is not protected by any federal, State, or local regulations, and there are no expected impacts to any CSS habitat within designated critical habitat. The existing CSS at Basins 780R and 878R was previously planted as mitigation in response to the construction of SR-73. This CSS is considered marginal due to existing conditions and the overall project value (native plant installation) will compensate for these impacts to CSS. Concurrence from Sally Brown (USFWS) was received by Lesley Hill (Caltrans) via e-mail on May 4, 2009.

SR-73 was constructed in compliance with a Biological Opinion, and impacts to CSS were mitigated at that time. SR-73 was incorporated into the NCCP/HCP as a nonreserve area in 1996. Therefore, work at the basins will not impact NCCP/HCP reserve areas.

However, on February 3, 1999, President Clinton signed EO 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. Therefore, in compliance with EO 13112, temporarily impacted areas would be

revegetated with plant species that prevent the introduction or spread of invasive species. In areas adjacent to native vegetation, the use of plant species native to the vicinity is highly recommended. This would include revegetation with CSS species.

4.1.2.5. Cumulative Impacts

The three basins are not within the NCCP/HCP reserve, but they are located immediately adjacent to the NCCP/HCP reserve area. Thus, it is reasonably foreseeable that those parcels that are not currently developed will not be developed in the future.

The NCCP/HCP was conceived, was developed, and is being implemented specifically to address the direct, indirect, cumulative, and growth-related effects on species and habitats within Orange County resulting from the build out of planned land uses. It provides a comprehensive regional open space reserve offering permanent protection to a wide range of local wildlife and natural habitats in large-scale ecosystem landscapes while allowing for planned economic development outside of the protected reserve areas.

CSS is one of the natural habitats that is protected by the NCCP/HCP. SR-73 was built in compliance with a Biological Opinion and impacts to CSS were mitigated at that time. SR-73 was incorporated into the NCCP/HCP in 1996. Therefore, cumulative effects of the proposed project are considered adequately mitigated.

4.2. Special-Status Plant Species

A total of 8 of the 40 special-status plant species with potential of occurring within the vicinity of the BSA are federally and/or State-listed as endangered, threatened, or candidate species: thread-leaved brodiaea (*Brodiaea filifolia*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*), slender-horned spineflower (*Dodecahema leptoceras*), Laguna Beach dudleya (*Dudleya stolonifera*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), Gambel's water cress (*Rorippa gambellii*), and big-leaved crownbeard (*Verbesina dissita*). As noted in Chapter 3, suitable habitat for salt marsh bird's beak, slender-horned spineflower, Laguna Beach dudleya, Santa Ana River woollystar, and big-leaved crownbeard is not present within the BSA and, therefore, these species are not discussed further. The results of surveys, critical habitat analysis, minimization/mitigation measures, project impacts, and cumulative impacts for thread-leaved brodiaea, San Fernando Valley spineflower,

and Gambel's water cress are discussed in this chapter. In addition, other special-status plant species, including those listed by the CNPS as List 1B.1, 2, 3, and 4, with potential of occurring within the BSA are discussed in this chapter.

4.2.1. Discussion of Thread-Leaved Brodiaea

Thread-leaved brodiaea is a perennial, bulbiferous herb that occurs in chaparral openings, CSS, valley and foothill grassland, cismontane woodland, and vernal pools, and typically on clay soils from 115 to 4,003 ft amsl in elevation. Populations of thread-leaved brodiaea are typically found on flat or gently sloping grassland areas surrounded by shrubland. This species is federally listed as threatened and State-listed as endangered. It is also a CNPS List 1B.1 species.

4.2.1.1. Survey Results

Some suitable habitat that could support this species exists at all three basins (765L, 780R, and 878R); however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species.

This species was not found during surveys conducted in 2008 or 2009. Therefore, it is considered absent from the BSA.

4.2.1.2. Avoidance and Minimization Efforts

No avoidance and minimization measures were warranted because the proposed project is not expected to affect thread-leaved brodiaea.

4.2.1.3. Project Impacts

The proposed project would not be expected to affect thread-leaved brodiaea because the species is considered absent from the BSA.

4.2.1.4. Compensatory Mitigation

No compensatory mitigation is expected for thread-leaved brodiaea, as the proposed project is not expected to affect this species.

4.2.1.5. Cumulative Effects

Because much of the potential habitat within the BSA is marginal and thread-leaved brodiaea was not found during 2008 or 2009 surveys, it is unlikely that this project will contribute to cumulative effects to this species.

4.2.2. Discussion of San Fernando Valley Spineflower

San Fernando Valley spineflower is an annual herb that occurs in CSS on sandy soils. It is found at elevations ranging from 450 to 3,660 ft amsl. This species is a federal species of concern and is State-listed as endangered. It is also a CNPS List 1B.1 species.

4.2.2.1. Survey Results

Some suitable habitat that could support this species exists on site at all three basins (765L, 780R and 878R); however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species.

This species was not found during surveys conducted in 2008 or 2009. Therefore, it is considered absent from the BSA.

4.2.2.2. Avoidance and Minimization Efforts

No avoidance or minimization measures were warranted because the proposed project is not expected to affect San Fernando Valley spineflower.

4.2.2.3. Project Impacts

The proposed project would not be expected to affect San Fernando Valley spineflower because the species is considered absent from the BSA.

4.2.2.4. Compensatory Mitigation

No compensatory mitigation is expected for San Fernando Valley spineflower, as the proposed project is not expected to affect this species.

4.2.2.5. Cumulative Effects

Because much of the potential habitat within the BSA is marginal and San Fernando Valley spineflower was not found during 2008 or 2009 surveys, it is unlikely that this project will contribute to cumulative effects to this species.

4.2.3. Discussion of Gambel's Water Cress

Gambel's water cress is a perennial rhizomatous herb that occurs in freshwater or brackish marshes and swamps and at the margins of lakes and along streams. It is found at elevations ranging from 15 to 990 ft amsl. This species is federally listed as endangered and State-listed as threatened. It is also a CNPS List 1B.1 species.

4.2.3.1. Survey Results

Some suitable habitat that could support this species exists on site at all three basins (765L, 780R and 878R); however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species.

This species was not found during surveys conducted in 2008 or 2009. Therefore, the species is considered absent from the BSA.

4.2.3.2. Avoidance and Minimization Efforts

No avoidance or minimization measures were warranted because the proposed project is not expected to affect Gambel's water cress.

4.2.3.3. Project Impacts

The proposed project would not be expected to affect Gambel's water cress because it is considered absent from the BSA.

4.2.3.4. Compensatory Mitigation

No compensatory mitigation is expected for Gambel's water cress, as the proposed project is not expected to affect this species.

4.2.3.5. Cumulative Effects

Because much of the potential habitat within the BSA is marginal and Gambel's water cress was not found during 2008 or 2009 surveys, it is unlikely that this project will contribute to cumulative effects to this species.

4.2.4. Special-Status Coastal Sage Scrub and Chaparral Plant Species

Other special-status species with the potential to occur in CSS and chaparral habitats within the BSA include chaparral sand verbena (*Abronia villosa* var. *aurita*), aphanisma (*Aphanisma blitoides*), Coulter's saltbush (*Atriplex coulteri*), south coast saltscale (*Atriplex pacifica*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), Lewis' evening-primrose (*Camissonia lewisii*), Orcutt's pincushion (*Chaenactis orcuttiana*), summer holly (*Comarostaphylis diversifolia* ssp. *planifolia*), Blochman's dudleya (*Dudleya blochmaniae*), many-stemmed dudleya (*Dudleya multicaulis*), cliff spurge (*Euphorbia misera*), vernal barley (*Hordeum intercedens*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), decumbent goldenbush (*Isocoma menziesii* var. *decumbens*),

prostrate vernal pool navarretia (*Navarretia prostrata*), peninsular nolina (*Nolina cismontana*), Allen's pentachaeta (*Pentachaeta aurea* ssp. *allenii*), white rabbit-tobacco (*Pseudognaphalium californicum*), Nuttall's scrub oak (*Quercus dumosa*), chaparral ragwort (*Senecio aphanactis*), salt spring checkerbloom (*Sidalcea neomexicana*), and San Bernardino aster (*Aster bernardinus*).

4.2.4.1. Survey Results

Some suitable habitat exists on site that could support these species; however, much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species. In addition, none of these species were found during surveys conducted in 2008 and 2009. Therefore, all of these species are considered absent from the BSA.

4.2.4.2. Avoidance and Minimization Efforts

No avoidance and minimization measures are warranted because these species are considered absent from the BSA.

4.2.4.3. Project Impacts

The proposed project would not be expected to affect any of these species because they are considered absent from the BSA.

4.2.4.4. Compensatory Mitigation

No compensatory mitigation is warranted because these species are considered absent from the BSA.

4.2.4.5. Cumulative Effects

Because these species are considered absent from the BSA, it is unlikely that this project will contribute to cumulative effects to them.

4.2.5. Special-Status Riparian/Riverine Plant Species

Other special-status species with the potential to occur in riparian/riverine habitats within the BSA include Parish's brittlescale (*Atriplex parishii*), southern tarplant (*Hemizonia parryi* ssp. *australis*), Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), vernal barley, Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), mud nama (*Nama stenocarpum*), prostrate vernal pool navarretia, white rabbit-tobacco, Sanford's arrowhead (*Sagittaria sanfordii*), salt spring checkerbloom, and San Bernardino aster.

4.2.5.1. Survey Results

Surveys conducted in 2008 and 2009 for these species were negative.

4.2.5.2. Avoidance and Minimization Efforts

No avoidance and minimization measures are warranted because these species are considered absent from the BSA. In addition, no work is to occur at Basin 765L.

4.2.5.3. Project Effects

The proposed project would not be expected to affect any of these species because they are considered absent from the BSA. In addition, no work is to occur at Basin 765L.

4.2.5.4. Compensatory Mitigation

No compensatory mitigation is warranted because these species are considered absent from the BSA. In addition, no work is to occur at Basin 765L.

4.2.5.5. Cumulative Effects

Because these species are considered absent from the BSA and no work is to occur at Basin 765L, it is unlikely that this project will contribute to cumulative effects to them.

4.2.6. Special-Status Grassland and Disturbed Area Plant Species

Special-status species with the potential to occur in grassland disturbed habitats within the BSA include Coulter's saltbush, south coast saltscale, Lewis' evening-primrose, southern tarplant, Blochman's dudleya, many-stemmed dudleya, vernal barley, and Coulter's goldfields.

4.2.6.1. Survey Results

Some suitable habitat that could support these species exists on site; however, much of this habitat is disturbed, developed, or degraded by infestations of nonnative species. In addition, none of the species listed above were found during surveys conducted in 2008 and 2009.

4.2.6.2. Avoidance and Minimization Efforts

No avoidance and minimization measures are warranted because these species are considered absent from the BSA.

4.2.6.3. Project Impacts

The proposed project would not be expected to affect any of these species because they are considered absent from the BSA.

4.2.6.4. Compensatory Mitigation

No compensatory mitigation is warranted because these species are considered absent from the BSA.

4.2.6.5. Cumulative Effects

Because these species are considered absent from the BSA, it is unlikely that this project will contribute to cumulative effects to them.

4.3. Special-Status Animal Species Occurrences

A total of 12 of the 62 special-status animal species with the potential of occurring within the vicinity of the BSA are federally and/or State-listed endangered or threatened, proposed endangered or threatened, or considered fully protected species by the State of California: Santa Ana sucker (*Catostomus santaanae*), tidewater goby (*Eucyclogobius newberryi*), arroyo toad (*Bufo californicus*), western snowy plover (*Charadrius alexandrinus nivosus*), white-tailed kite (*Elanus leucurus*), California black rail (*Laterallus jamaicensis coturniculus*), Belding's Savannah sparrow (*Passerculus sandwichensis*), light-footed clapper rail (*Rallus longirostris levipes*), CAGN, California least tern (*Sterna antillarum*), least Bell's vireo (LBV) (*Vireo bellii pusillus*), and Pacific pocket mouse (*Perognathus longimembris pacificus*). As noted in Chapter 3, suitable habitat for 9 of these species is not present within the BSA: Santa Ana sucker, tidewater goby, arroyo toad, Western snowy plover, California black rail, Belding's Savannah sparrow, light-footed clapper rail, California least tern, and Pacific pocket mouse. These species are therefore not discussed further. The results of surveys, critical habitat discussion, minimization/mitigation measures, project effects, and cumulative effects for the remaining listed wildlife species are discussed in this section. In addition, other special-status wildlife species with potential of occurring within the BSA are discussed in this section.

probability of CAGN to occur within the BSA. However, the proposed project is expected to have indirect and temporary impacts to CAGN through loss of potential foraging habitat. Therefore, project impacts for this species are the same as those described for the CSS natural community in Section 4.1.2.3.

4.3.2.4. Compensatory Mitigation

Due to the measures described above, the proposed project is not expected to directly affect this species; therefore, specific compensatory mitigation is not warranted.

4.3.2.5. Cumulative Effects

Cumulative effects to CAGN are expected through the loss and degradation of potential foraging habitat. As a result, cumulative effects to CAGN are the same as those described for the CSS natural community in Section 4.1.2.5.

4.3.3. Discussion of Least Bell's Vireo

The LBV was listed as an endangered species by State and federal agencies in 1980 and 1986, respectively, and critical habitat for the species was designated in 1994 (USFWS 1986, 1994). The LBV is a small migratory songbird that nests in Southern California. This species is a summer resident of Southern California and breeds in willow thickets and other dense, low riparian growths in lowlands and lower portions of canyons. Approximately 38,000 ac of critical habitat was designated for the LBV in 1994. The critical habitat occurs in 10 areas throughout Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties. Approximately 49 percent of the LBV population in the United States occurred within these 10 areas in 1994. Critical habitat for the LBV occurs along the Santa Ynez River, the Santa Clara River, the Santa Ana River, the Santa Margarita River, the San Luis Rey River, Sweetwater River, the San Diego River, the Tijuana River, Coyote Creek, Jamul Creek, and Dulzura Creek.

4.3.3.1. Survey Results

LBV was not observed within the BSA during the 2008 and 2009 surveys. However, focused surveys were not conducted.

4.3.3.2. Avoidance and Minimization Efforts

Although there is suitable riparian habitat for LBV at Basin 765L, no avoidance and minimization measures are warranted because no work is proposed at this basin.

4.3.3.3. Project Impacts

Although, suitable riparian habitat for LBV occurs at Basin 765L, no work is proposed to occur at this basin. Therefore, the proposed project would result in no direct, indirect, permanent, or temporary impacts to this species.

4.3.3.4. Compensatory Mitigation

The proposed project is not expected to directly affect any LBV since no work will be conducted at Basin 765L. Therefore, no compensatory mitigation for this species is warranted.

4.3.3.5. Cumulative Effects

Cumulative effects to LBV are not expected because no work is to occur at Basin 765L. As a result, cumulative effects to this species are the same as those described for the riparian/riverine natural community in Section 4.2.5.5.

4.3.4. Discussion of Special-Status Coastal Sage Scrub and Chaparral Animal Species

In addition to the species discussed above, special-status CSS and chaparral species with the potential to occur in the BSA include San Diego horned lizard (*Phrynosoma coronatum blainvillei*), orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), rosy boa (*Lichanura trivirgata*), northern red-diamond rattlesnake (*Crotalus exsul*), San Bernardino ringneck snake (*Diadophis punchatus modestus*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Costa's hummingbird (*Calypte costae*), Lawrence's goldfinch (*Carduelis lawrencei*), lark sparrow (*Chondestes gammacus*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), Allen's hummingbird (*Selasphorus sasin*), San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), western mastiff bat (*Eumops perotis*), San Diego desert woodrat (*Neotoma lepida intermedia*), and Dulzura pocket mouse (*Chaetodipus californicus femoralis*).

4.3.4.1. Survey Results

With the exception of Costa's hummingbird, none of the above species were observed within the BSA during the surveys conducted in 2008 and 2009. Although most of these species were not observed during surveys, the surveys were not focused on

these species. In addition, it is possible for these species to move onto the site prior to construction. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists within the BSA.

4.3.4.2. Avoidance and Minimization Efforts

Because the above species occupy the CSS and/or chaparral natural communities, avoidance and minimization efforts for special-status CSS and chaparral animal species are the same as those described for the CSS natural community in Section 4.1.2.2.

4.3.4.3. Project Effects

The proposed project is not expected to directly affect any of these species as a result of the avoidance and minimization measures described in Section 4.1.2.2; however, the proposed project is expected to have indirect and temporary effects to them through the loss of potential habitat. Therefore, project effects for these species are the same as those described for the CSS natural community in Section 4.1.2.3.

4.3.4.4. Compensatory Mitigation

Due to the avoidance and minimization measures described in Section 4.1.1.2, the proposed project is not expected to directly affect these species; therefore, specific compensatory mitigation is not warranted. However, because these species occupy CSS habitat, compensatory mitigation described for the CSS natural community in Section 4.1.2.4 will benefit these species as well.

4.3.4.5. Cumulative Effects

Incremental cumulative effects to these species will result from the loss and degradation of available habitat. Because of this, cumulative effects to these species are the same as those described for the CSS natural community in Section 4.1.2.5.

4.3.5. Discussion of Special-Status Riparian and Aquatic Animal Species

In addition to the species discussed above, many special-status animal species occur within riparian and aquatic habitats, including southwestern pond turtle (*Clemmys marmorata pallida*), San Diego horned lizard, orange-throated whiptail, coastal western whiptail, San Bernardino ringneck snake, two-striped garter snake (*Thamnophis hammondi*), coast patch-nosed snake, Cooper's hawk (*Accipiter*

cooperii), great blue heron (*Ardea herodias*), Nuttall's woodpecker (*Picoides nuttallii*), Lawrence's goldfinch, yellow warbler (*Dendroica petechia*), merlin, yellow-breasted chat (*Icteria virens auricollis*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), southwestern yellow bat (*Lasiurus xanthinus*), western small-footed myotis (*Myotis leibii melanorhinus*), Yuma myotis (*Myotis yumaensis*), and big free-tailed bat (*Nyctinomops macrotis*).

4.3.5.1. Survey Results

Of the special-status species mentioned above, Nuttall's woodpecker was the only species observed within the BSA during surveys conducted in 2008 and 2009. Although the remaining special-status species were not observed during surveys, the surveys were not focused on these species. In addition, it is possible for these species to move onto the site prior to construction. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists within the BSA.

4.3.5.2. Avoidance and Minimization Efforts

Although there is suitable riparian habitat for these species at Basin 765L, no avoidance and minimization measures were warranted because no work is proposed at this basin.

4.3.5.3. Project Impacts

Although, suitable riparian habitat for these species occurs at Basin 765L, no work is proposed to occur at this basin. Therefore, the proposed project would result in no direct, indirect, permanent or temporary impacts to these species.

4.3.5.4. Compensatory Mitigation

The proposed project is not expected to directly affect any of these species since no work will be conducted at Basin 765L. Therefore, no compensatory mitigation for these species is warranted.

4.3.5.5. Cumulative Effects

Cumulative effects to these species are not expected because no work is to occur at Basin 765L. As a result, cumulative effects to these species are the same as those described for the riparian/riverine natural community in Section 4.2.5.5.

4.3.6. Discussion of Special-Status Grassland and Open Habitat Animal Species

In addition to the species discussed above, many special-status animal species occur within grassland and open habitats, including the western spadefoot (*Spea hammondi*), San Diego horned lizard, coastal western whiptail, northern red-diamond rattlesnake, California legless lizard (*Anniella pulchra*), burrowing owl (BUOW) (*Athene cunicularia*), lark sparrow, merlin, loggerhead shrike, Allen's hummingbird, Dulzura pocket mouse, and western mastiff bat.

4.3.6.1. Survey Results

None of these species were observed within the BSA during surveys conducted in 2008 and 2009. Although most of these species were not observed during surveys, the surveys were not focused on these species. In addition, it is possible for these species to move onto the site prior to construction. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists within the BSA.

4.3.6.2. Avoidance and Minimization Efforts

The following measures will be incorporated to avoid and minimize effects to special-status grassland and open habitat animal species:

- In order to avoid effects to nesting birds, any native or exotic vegetation removal or tree-trimming activities shall occur outside of the nesting season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist shall conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer shall be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing shall not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.
- A biologist shall monitor all construction activities for the duration of the project in areas adjacent to ESA boundaries to flush any wildlife species present prior to construction and to ensure that vegetation removal, BMPs, ESAs, and all avoidance and minimization measures are properly adhered to.

4.3.6.3. Project Effects

The proposed project is not expected to directly affect any of these species as a result of the avoidance and minimization measures described above.

4.3.6.4. Compensatory Mitigation

Due to the avoidance and minimization measures described above, the proposed project is not expected to directly affect these species; therefore, specific compensatory mitigation is not warranted. However, on February 3, 1999, President Clinton signed EO 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. Therefore, in compliance with EO 13112, a weed abatement program will be developed, and temporarily affected areas will be revegetated with plant species that help prevent the introduction or spread of invasive species. Details on the weed abatement program are provided in Section 5.4, Invasive Species.

4.3.6.5. Cumulative Effects

Although the grassland and open areas within the project area consist predominantly of nonnative vegetation, subsequent development would replace this vegetation with impervious areas. Therefore, the cumulative effects of the proposed project may incrementally contribute to cumulative effects to these species through the loss of potential habitat.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

Under the provisions of Section 7(a)(2) of FESA, a federal agency (e.g., FHWA) that permits, licenses, funds, or otherwise authorizes a project activity must consult with the USFWS to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat. This NES provides details on the proposed project's impacts to federally listed plant and wildlife species. Since the proposed project is not expected to directly affect any federally listed species or designated critical habitat, a Section 7 consultation is not expected to be necessary.

5.2. California Endangered Species Act Consultation Summary

CESA protects plant and animal species listed as rare, threatened, or endangered. CDFG authorizes take of endangered, threatened, or candidate species through the provisions of Sections 2081 and 2081.1 of the California Fish and Game Code. Authorization from CDFG for take of any endangered, threatened, or candidate species is not expected to be necessary.

5.3. Wetlands and Other Waters Coordination Summary

The findings and conclusions of the locations and extent of wetlands and other waters subject to regulatory jurisdiction (or lack thereof) represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the USACE, CDFG, and the RWQCB.

5.3.1. USACE Jurisdiction

As described in the Jurisdictional Delineation Report (Appendix D), Basin 765L was the only basin of the three described in this report to be considered potentially

jurisdictional by the USACE. Confirmation was verified from two jurisdictional determination letters dated March 20, 2009, received by Charles Baker (Caltrans) from Jae Chung (USACE). On April 27, 2009, an email was submitted to Lesley Hill (Caltrans) from Sophia Huynh (USACE), clarifying that because Basin 765L is adjacent to an unnamed perennial creek via a connection under El Toro Road, the USACE will assert jurisdiction over it. During periods of high flow, it appears that water flows back and forth between the basin and the creek. The basin appears to remain inundated or saturated long enough to meet USACE wetland criteria, and it is adjacent to a relatively permanent tributary to a traditionally navigable water. The basin consists entirely of hydrophytes, appears to be made up of sandy clay-loam soil, and appears to be hydrologically connected to a large wetland area associated with an unnamed perennial creek. The total acreage of USACE wetland waters within the study area is 1.32 ac. Wetlands adjacent to nonwetland waters and/or waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA, are not waters of the United States. However, since Basin 765L is adjacent to an unnamed perennial creek via a connection under El Toro Road, this basin is considered jurisdictional by the USACE even though it was constructed for and also functions as a treatment pond. The location of this wetland area is shown in Appendix A of the Jurisdictional Delineation Report.

However, no work is proposed to occur at Basin 765L, and a Section 404 permit from the USACE will not be required.

5.3.2. CDFG Jurisdiction

The area satisfying the USACE jurisdictional criteria for waters of the United States and adjacent wetlands, as described above, is also subject to CDFG jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Basin 765L was the only basin considered potentially jurisdictional by CDFG. Basin 765L appears to have a direct hydrologic connection to the unnamed perennial creek situated across El Toro Road from the basin. Additionally, riparian vegetation associated with the basin is similar to that of the creek. Most likely, this basin will be considered an extension of the creek and thereby may be considered jurisdictional by CDFG. The total acreage of CDFG jurisdiction within the BSA is 1.32 ac, which is the same total area delineated as USACE jurisdiction.

However, no work is proposed to occur at Basin 765L, and a SAA from CDFG will not be required. Concurrence that the proposed project will not require a SAA was

received by Lesley Hill (Caltrans) from Pam Beare (CDFG) via e-mail on May 26, 2009.

5.3.3. RWQCB Jurisdiction

Basin 765L was the only basin considered potentially jurisdictional by the RWQCB per Section 401 of the CWA. Basin 765L appears to have a direct hydrologic connection to an unnamed perennial creek situated across El Toro Road, and during periods of high flow it appears that water flows back and forth between the basin and the creek. Therefore, it is likely that this basin would be subject to RWQCB regulatory authority per Section 401 of the CWA. Since there is no public guidance for determining RWQCB jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands (three-parameter) and other waters of the United States (OHWM), as recommended by the September 2004 Workplan. The total area of potential RWQCB jurisdiction is 1.32 ac.

However, no work is proposed to occur at Basin 765L, and a Section 401 Water Quality Certification from the RWQCB will not be required.

The other basins were constructed on dry land for the sole purpose of collecting and treating runoff water from SR-73. The storm water collection basins were built pursuant to CWA authorization and are designed to protect waters of the United States and waters of the State as part of the proposed project. Therefore, these basins should not be considered jurisdictional by the RWQCB per either Section 401 of the CWA or the Porter-Cologne Act.

5.4. Invasive Species

Exotic plant species exist within the nonnative plant communities throughout the BSA, within patches of native plant communities, and in areas that have been disturbed by human uses. Exotic species are typically more numerous adjacent to roads and developed areas and frequently border the ornamental landscape. In the past, these areas likely supported grassland, oak woodland, CSS, and riparian habitats. Consequently, scattered plant species associated with these plant communities are often found in these areas.

A total of 19 exotic plants occurring on California Invasive Plant Council's (Cal-IPC) California Invasive Plant Inventory were identified. Of these species, there are 2 with

an overall high rating, 12 with a moderate rating, and 5 with a limited rating. Invasive species that have severe ecological impacts are given a high rating. Species with a high rating identified within the BSA include: giant reed (*Arundo donax*) and foxtail chess (*Bromus madritensis* ssp. *madritensis*). These observations should not be considered all-inclusive.

In compliance with EO 13112, a weed abatement program will be developed to minimize the importation of nonnative plant material during and after construction. Eradication strategies would be employed should an invasion occur. At a minimum, this program will include the following measures.

- During construction, the construction contractor shall inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.
- During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.
- During construction, the construction contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
- During construction, the construction contractor shall ensure that all material stockpiled is sufficiently watered or covered to prevent excessive amounts of dust.
- During construction, soil/gravel/rock will be obtained from weed-free sources.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
- After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the District Biologist that are native to the vicinity.
- After construction, all revegetated areas will avoid the use of species listed on Cal-IPC's California Invasive Plant Inventory that have a high or moderate rating.
- Erosion control and revegetation sites will be monitored for 2 to 3 years after construction to detect and control the introduction/invasion of nonnative species.
- Eradication procedures (e.g., spraying and/or hand weeding) will be outlined should an infestation occur; the use of herbicides will be prohibited within and

adjacent to native vegetation, except as specifically authorized and monitored by the District Biologist.

5.5. Migratory Bird Treaty Act

Native bird species and their nests are protected under the MBTA (16 USC 703-712). The MBTA states that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird and its eggs, parts, and nests, except as authorized under a valid permit.

EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs federal agencies "taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding with the Fish and Wildlife Service that promotes the conservation of migratory bird populations." In accordance with EO 13186 and the provisions of the MBTA, the following measure will be incorporated as described in Chapter 4:

- In order to avoid effects to nesting birds, any native or exotic vegetation removal or tree trimming activities will occur outside of the nesting season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under guidance of the biologist, and construction or clearing will not be conducted within this zone until the biologist determines that the young have fledged or the nest is no longer active.

Chapter 6. References

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California Department of Fish and Game, Resource Management and Planning Division, Biogeographic Data Branch. October 2007. State and Federally Listed Endangered, Threatened, and Rare Plants of California. The Resources Agency, Sacramento, California.

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California Natural Diversity Database. 2009. *Orange, Newport Beach, Tustin, El Toro, Laguna Beach, San Juan Capistrano, and Dana Point, California* USGS 7.5-minute quadrangles.

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Southern California and Northwestern Baja California, Mexico. Federal Register 58:16742–16757.

United States Fish and Wildlife Service. 1986. Endangered and Threatened Wildlife and Plants; Final Rule Determining Endangered Status for the Least Bell's Vireo. Federal Register 51: 16474–16482.

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Appendix A Vascular Plant Species Observed

APPENDIX A VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the study area by LSA biologist(s) Elizabeth Delk, Corey Knips, Ingri Quon, and Leo Simone and Caltrans Biologist Lesley Hill during site surveys conducted on November 7 and 18, 2008, and April 15, 2009.

* Introduced, nonnative species

Anacardiaceae

Malosma laurina
Rhus integrifolia

Asteraceae

Artemisia californica
Artemisia douglasiana
Baccharis pilularis
Baccharis salicifolia
* *Centaurea melitensis*
* *Chrysanthemum coronarium*
* *Cirsium vulgare*
Encelia californica
Heterotheca grandiflora
Isocoma menziesii var. *vernonioides*
Pseudognaphalium californicum
* *Silybum marianum*
* *Sonchus asper* ssp. *asper*
* *Sonchus oleraceus*
Xanthium strumarium

Boraginaceae

Cryptantha sp.

Brassicaceae

* *Brassica rapa*
* *Hirschfeldia incana*
* *Lobularia maritima*
* *Sisymbrium irio*

Caprifoliaceae

Sambucus mexicana

Chenopodiaceae

* *Atriplex semibaccata*
* *Salsola tragus*

Convolvulaceae

* *Convolvulus arvensis*

Sumac Family

Laurel sumac
Lemonade berry

Sunflower Family

California sagebrush
Mugwort
Coyote bush
Mulefat
Tocalote
Garland chrysanthemum
Bull thistle
California encelia
Telegraph weed
Coastal goldenbush
California everlasting
Milk thistle
Prickly sow-thistle
Common sow-thistle
Common cocklebur

Borage Family

Cryptantha

Mustard Family

Field mustard
Shortpod mustard
Sweet-alyssum
London rocket

Honeysuckle Family

Mexican elderberry

Goosefoot Family

Australian saltbush
Russian-thistle

Morning-Glory Family

Field bindweed

Euphorbiaceae

Croton setigerus

Fabaceae

Lotus scoparius var. *scoparius*

Lupinus bicolor

Lupinus succulentus

* *Medicago lupulina*

* *Melilotus alba*

* *Melilotus indica*

* *Vicia villosa*

Fagaceae

Quercus agrifolia var. *agrifolia*

Geraniaceae

* *Erodium cicutarium*

Hydrophyllaceae

Phacelia sp.

Lamiaceae

Salvia apiana

Salvia mellifera

Malvaceae

* *Malva parviflora*

Onagraceae

Epilobium ciliatum ssp. *ciliatum*

Plantaginaceae

Plantago erecta

Platanaceae

Platanus racemosa

Rosaceae

Heteromeles arbutifolia

Salicaceae

Populus fremontii ssp. *fremontii*

Salix lasiolepis

Scrophulariaceae

Mimulus aurantiacus

Solanaceae

* *Nicotiana glauca*

Spurge Family

Doveweed

Legume Family

Coastal deerweed

Miniature lupine

Arroyo lupine

Black medick

White sweetclover

Yellow sweetclover

Winter vetch

Beech Family

Coast live oak

Geranium Family

Red-stemmed filaree

Waterleaf Family

Phacelia

Mint Family

White sage

Black sage

Mallow Family

Cheeseweed

Evening Primrose Family

Green willow-herb

Plantain Family

California plantain

Sycamore Family

Western sycamore

Rose Family

Toyon

Willow Family

Western cottonwood

Arroyo willow

Figwort Family

Bush monkey flower

Nightshade Family

Tree tobacco

**ANGIOSPERMAE: MONOCOTYLEDONAE
PLANTS**

Arecaceae

- * *Washingtonia robusta*

Iridaceae

- Sisyrinchium bellum*

Liliaceae

- Dichelostemma capitatum* ssp. *capitatum*

Poaceae

- * *Arundo donax*
- * *Avena* sp.
- * *Bromus diandrus*
- * *Bromus madritensis* ssp. *rubens*
- * *Hordeum murinum* ssp. *leporinum*
- * *Lolium multiflorum*
- Nassella* sp.

Typhaceae

- Typha* sp.

MONOCOT FLOWERING

Palm Family

- Mexican fan palm

Iris Family

- Blue-eyed grass

Lily Family

- Blue dicks

Grass Family

- Giant reed
- Wild oats
- Ripgut grass
- Foxtail chess
- Bare barley
- Italian ryegrass
- Needlegrass

Cat-Tail Family

- Cat-tail

Taxonomy and scientific nomenclature conform to Hickman (1993). Common names for each taxa generally conform to Roberts (1998), although Abrams (1923, 1944, 1951) and Abrams and Ferris (1960) are used, particularly when species specific common names are not identified in Roberts (1998).

Appendix B Wildlife Species Observed

APPENDIX B WILDLIFE SPECIES OBSERVED

This is a list of the conspicuous aerial insects, bony fishes, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

* Species not native to the study area

AMPHIBIA

Hylidae

Pseudacris hypochondriaca

REPTILIA

Phrynosomatidae

Sceloporus occidentalis

AVES

Cathartidae

Cathartes aura

Accipitridae

Buteo lineatus

Buteo jamaicensis

Columbidae

Zenaida macroura

Apodidae

Aeronautes saxatilis

Trochilidae

Calypte anna

Calypte costae

Picidae

Picoides nuttallii

Tyrannidae

Sayornis nigricans

Tyrannus vociferans

Corvidae

Aphelocoma californica

AMPHIBIANS

Treefrogs and Relatives

Baja California treefrog

REPTILES

Phrynosomatid Lizards

Western fence lizard

BIRDS

New World Vultures

Turkey vulture

Hawks, Kites, Eagles, and Allies

Red-shouldered hawk

Red-tailed hawk

Pigeons and Doves

Mourning dove

Swifts

White-throated swift

Hummingbirds

Anna's hummingbird

Costa's hummingbird

Woodpeckers and Allies

Nuttall's woodpecker

Tyrant Flycatchers

Black phoebe

Cassin's kingbird

Crows and Jays

Western scrub-jay

<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	Common raven
Hirundinidae	Swallows
<i>Stelgidopteryx serripennis</i>	Northern rough-winged swallow
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Hirundo rustica</i>	Barn swallow
<i>Riparia riparia</i>	Bank swallow
Aegithalidae	Long-Tailed Tits and Bushtits
<i>Psaltirparus minimus</i>	Bushtit
Troglodytidae	Wrens
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	House wren
Timaliidae	Babblers
<i>Chamaea fasciata</i>	Wrentit
Mimidae	Mockingbirds and Thrashers
<i>Mimus polyglottos</i>	Northern mockingbird
Sturnidae	Starlings
* <i>Sturnus vulgaris</i>	European starling
Parulidae	Wood Warblers
<i>Dendroica coronata</i>	Yellow-rumped warbler
<i>Geothlypis trichas</i>	Common yellowthroat
Emberizidae	Emberizids
<i>Pipilo maculatus</i>	Spotted towhee
<i>Pipilo crissalis</i>	California towhee
<i>Melospiza melodia</i>	Song sparrow
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Icteridae	Blackbirds
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Icterus cucullatus</i>	Hooded oriole
<i>Icterus bullockii</i>	Bullock's oriole
Fringillidae	Fringilline and Cardueline
<i>Carpodacus mexicanus</i>	Finches and Allies
<i>Carduelis psaltria</i>	House finch
	Lesser goldfinch
Passeridae	Old World Sparrows
* <i>Passer domesticus</i>	House sparrow

MAMMALIA

Sciuridae

Marmots

Spermophilus beecheyi

Geomyidae

Thomomys bottae

Canidae

* *Canis lupus familiaris*

Canis latrans

Procyonidae

Procyon lotor

Cervidae

Odocoileus hemionus

MAMMALS

Squirrels, Chipmunks, and

California ground squirrel

Pocket Gophers

Botta's pocket gopher

Foxes, Wolves, and Allies

Feral dog

Coyote

Raccoons and Allies

Raccoon

Deer, Elk, and Allies

Mule deer

Taxonomy and nomenclature are based on the following.

Damselflies and dragonflies: Manolis, T. (2003, Dragonflies and Damselflies of California, University of California Press, Berkeley).

Butterflies: North American Butterfly Association (2001, NABA checklist and English Names of North American Butterflies, Second Edition, North American Butterfly Association, Morristown, New Jersey).

Fishes: Moyle, P.B. (2002, Inland Fishes of California, Second Edition, University of California Press, Berkeley).

Amphibians and reptiles: Crother, B.I. ed. (2008. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 37) for species taxonomy and nomenclature; Stebbins, R.C. (2003, A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, 2004, 2005, 2006, 2007, and 2008 supplements; see <http://aou.org.whsites.net/checklist/index.php3>).

Mammals: Wilson, D.E., and D.M. Reeder, eds. (2005. Mammal Species of the World, 3rd ed. Johns Hopkins University Press, Baltimore, Maryland; see <http://vertebrates.si.edu/mammals/msw/>).

Appendix C Coastal California Gnatcatcher Survey Report

Table A: Survey Schedule and Conditions

Date 2009	Time	Weather	Surveyor
March 27	0755-0910	Mostly clear, mild, calm	RE
April 3	0800-0930	Complete overcast, cool, calm	RE
April 9	0740-0915	Mostly overcast, cool, calm-light wind	RE

Surveyors: RE: Richard Erickson.

Mr. Erickson's surveys were conducted pursuant to Federal Fish and Wildlife Permit TE-777965-8 (April 8, 2008-April 7, 2012) and a temporary authorization from the CDFG (May 12, 2003-March 31, 2007; renewal request submitted March 26, 2007, extending coverage indefinitely) in lieu of a Memorandum of Understanding between LSA and the CDFG.

RESULTS

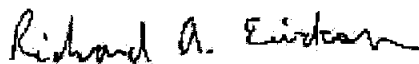
Although the habitat appeared suitable and the species is known to occur in the general area, no coastal California gnatcatchers were found.

A complete list of the animals detected during these surveys is included in Appendix A. A completed California Native Species Field Survey Form is provided I Appendix B.

If you have any questions, please contact me at (949) 553-0666.

Sincerely,

LSA ASSOCIATES, INC.



Richard Erickson
Associate/Biologist

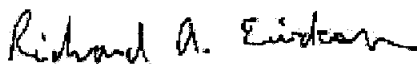
Attachments: Figure 1: Project Location
Appendix A: Animal Species Observed
Appendix B: California Native Species Field Survey Form

I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENTS MY WORK:

SURVEYOR:

PERMIT NUMBER

DATE:



Richard Erickson

TE-777965-8

April 30, 2009

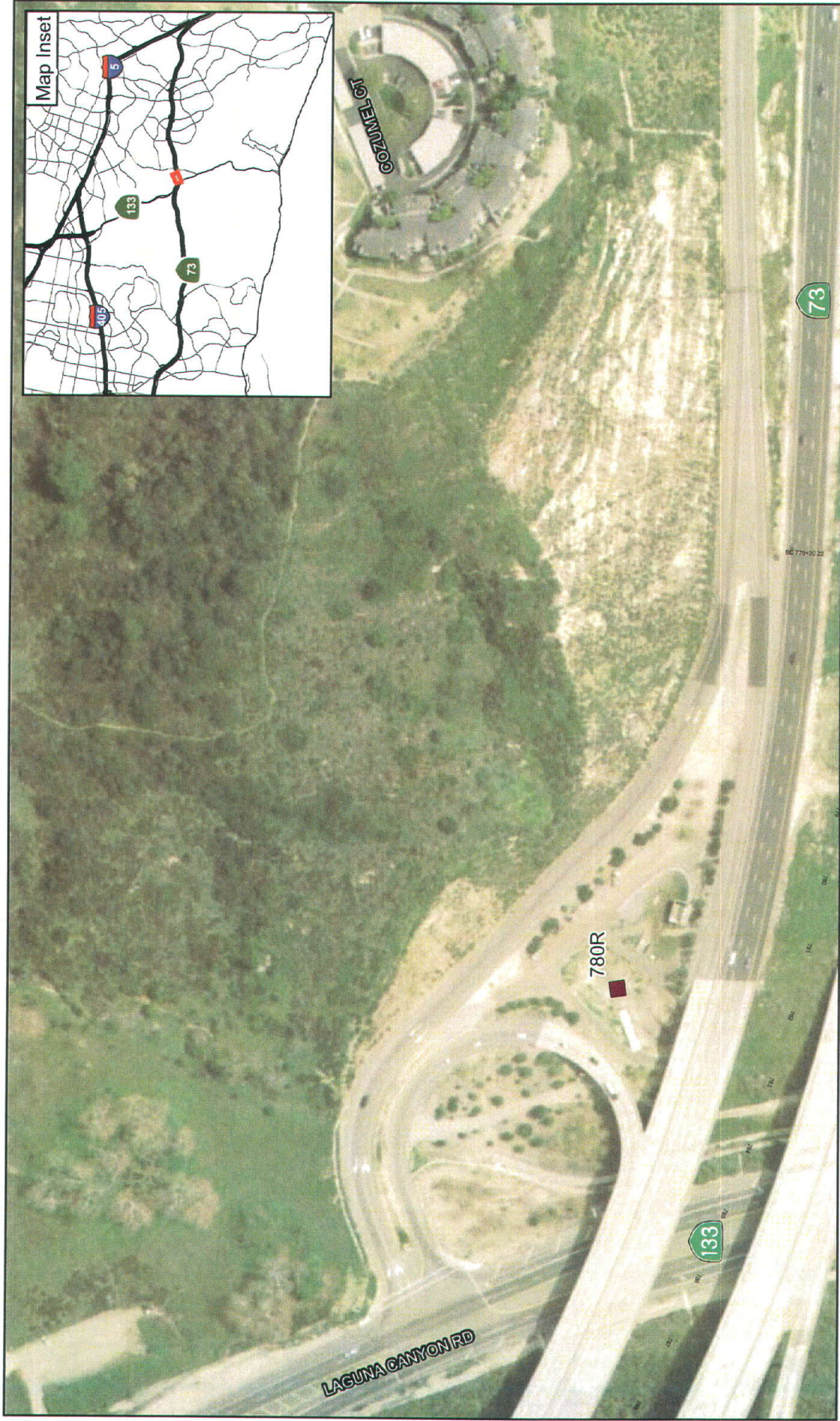


FIGURE 1

LSA

LEGEND

- Basin 780R



SR-73 Basin Sedimentation Project
Basin 780R - Gnatcatcher Survey

SOURCE: Air Photo USA (2008).

I:\CDT0807\GIS\Basin_780R.mxd (4/29/2009)

APPENDIX A

ANIMAL SPECIES DETECTED

APPENDIX A ANIMAL SPECIES DETECTED

This is a list of the conspicuous aerial insects, bony fishes, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

* Species not native to the study area

AMPHIBIA

Hylidae

Pseudacris hypochondriaca

AVES

Cathartidae

Cathartes aura

Accipitridae

Buteo lineatus

Buteo jamaicensis

Columbidae

Zenaidura macroura

Apodidae

Aeronautes saxatilis

Trochilidae

Calypte anna

Picidae

Picoides nuttallii

Tyrannidae

Sayornis nigricans

Tyrannus vociferans

Corvidae

Aphelocoma californica

Corvus corax

AMPHIBIANS

Treefrogs and Relatives

Baja California treefrog

BIRDS

New World Vultures

Turkey vulture

Hawks, Kites, Eagles, and Allies

Red-shouldered hawk

Red-tailed hawk

Pigeons and Doves

Mourning dove

Swifts

White-throated swift

Hummingbirds

Anna's hummingbird

Woodpeckers and Allies

Nuttall's woodpecker

Tyrant Flycatchers

Black phoebe

Cassin's kingbird

Crows and Jays

Western scrub-jay

Common raven

Hirundinidae

Stelgidopteryx serripennis
Petrochelidon pyrrhonota

Aegithalidae

Psaltirparus minimus

Troglodytidae

Troglodytes aedon

Timaliidae

Chamaea fasciata

Sturnidae

* *Sturnus vulgaris*

Emberizidae

Pipilo maculatus
Pipilo crissalis
Zonotrichia leucophrys

Icteridae

Icterus cucullatus
Icterus bullockii

Fringillidae

Carpodacus mexicanus
Carduelis psaltria

MAMMALIA

Sciuridae

Spermophilus beecheyi

Geomyidae

Thomomys bottae

Canidae

Canis latrans

Procyonidae

Bassariscus astutus
Procyon lotor

Swallows

Northern rough-winged swallow
Cliff swallow

Long-Tailed Tits and Bushtits

Bushtit

Wrens

House wren

Babblers

Wrentit

Starlings

European starling

Emberizids

Spotted towhee
California towhee
White-crowned sparrow

Blackbirds

Hooded oriole
Bullock's oriole

Fringilline and Cardueline Finches and Allies

House finch
Lesser goldfinch

MAMMALS

Squirrels, Chipmunks, and Marmots

California ground squirrel

Pocket Gophers

Botta's pocket gopher

Foxes, Wolves, and Allies

Coyote

Raccoons and Allies

Ringtail
Raccoon

Cervidae

Odocoileus hemionus

Deer, Elk, and Allies

Mule deer

Taxonomy and nomenclature are based on the following.

Amphibians and reptiles: Crother, B.I. ed. (2008. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 37) for species taxonomy and nomenclature; Stebbins, R.C. (2003, A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, 2004, 2005, 2006, 2007, and 2008 supplements; see <http://aou.org.whsites.net/checklist/index.php3>).

Mammals: Wilson, D.E., and D.M. Reeder, eds. (2005. Mammal Species of the World, 3rd ed. Johns Hopkins University Press, Baltimore, Maryland; see <http://vertebrates.si.edu/mammals/msw/>).

APPENDIX B
CALIFORNIA NATIVE SPECIES FIELD SURVEY FORM

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811

Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 3/27 - 4/9/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Polioptila californica californica*

Common Name: coastal California gnatcatcher

Species Found? ☐ Yes ☒ No not present?
If not, why?

Total No. Individuals _____ Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Richard A. Erickson

Address: LSA Associates, 20 Executive Park,
Suite 200, Irvine, CA 92614

E-mail Address: Richard.Erickson@LSA-associ.com

Phone: 949 553-0666

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults ☐ breeding # juveniles ☐ wintering # larvae ☐ burrow site # egg masses ☐ rookery # unknown ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: Orange

Landowner / Mgr.: Caltrans right-of-way?

Quad Name: Laguna Beach

Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

disturbed and undisturbed coastal sage scrub

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Immediate AND surrounding land use: road system to south, open space to north

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Plant / animal ☐ Slide ☐ Print ☐ Digital ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

Appendix D Jurisdictional Delineation Report

JURISDICTIONAL DELINEATION

SR-73 BASIN SEDIMENTATION PROJECT
SR-73 BETWEEN JAMBOREE ROAD AND I-5/SR-73 INTERCHANGE
ORANGE COUNTY, CALIFORNIA

Prepared for:

State of California
Department of Transportation
District 12
Orange County, California 92702

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614
(949) 553-0666

LSA Project No. CDT0807

LSA

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INTRODUCTION

This report presents the results of a delineation by LSA Associates, Inc. (LSA) of potential wetlands and waters subject to jurisdiction by the United States Army Corps of Engineers (ACOE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) as part of their evaluation for permit authorization under Section 404 of the federal Clean Water Act (CWA) for Streambed Alteration Agreement processing under Section 1600 et seq. of the California Fish and Game Code and certification under Section 401 of the CWA, respectively. This jurisdictional delineation is also an important source of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) information for the evaluation of potential impacts associated with reducing sedimentation runoff into 39 storm water basins along State Route 73 (SR-73) between the Interstate 5 (I-5)/SR-73 interchange and Jamboree Road, a distance of approximately 15 miles (mi) (Figure 1).

The findings and conclusions presented in this report, including the location and extent of wetlands and other waters (or lack of) subject to regulatory jurisdiction, represent the professional opinion of LSA and should be considered tentative until verified by representatives of the ACOE, CDFG, and RWQCB.

SITE DESCRIPTION

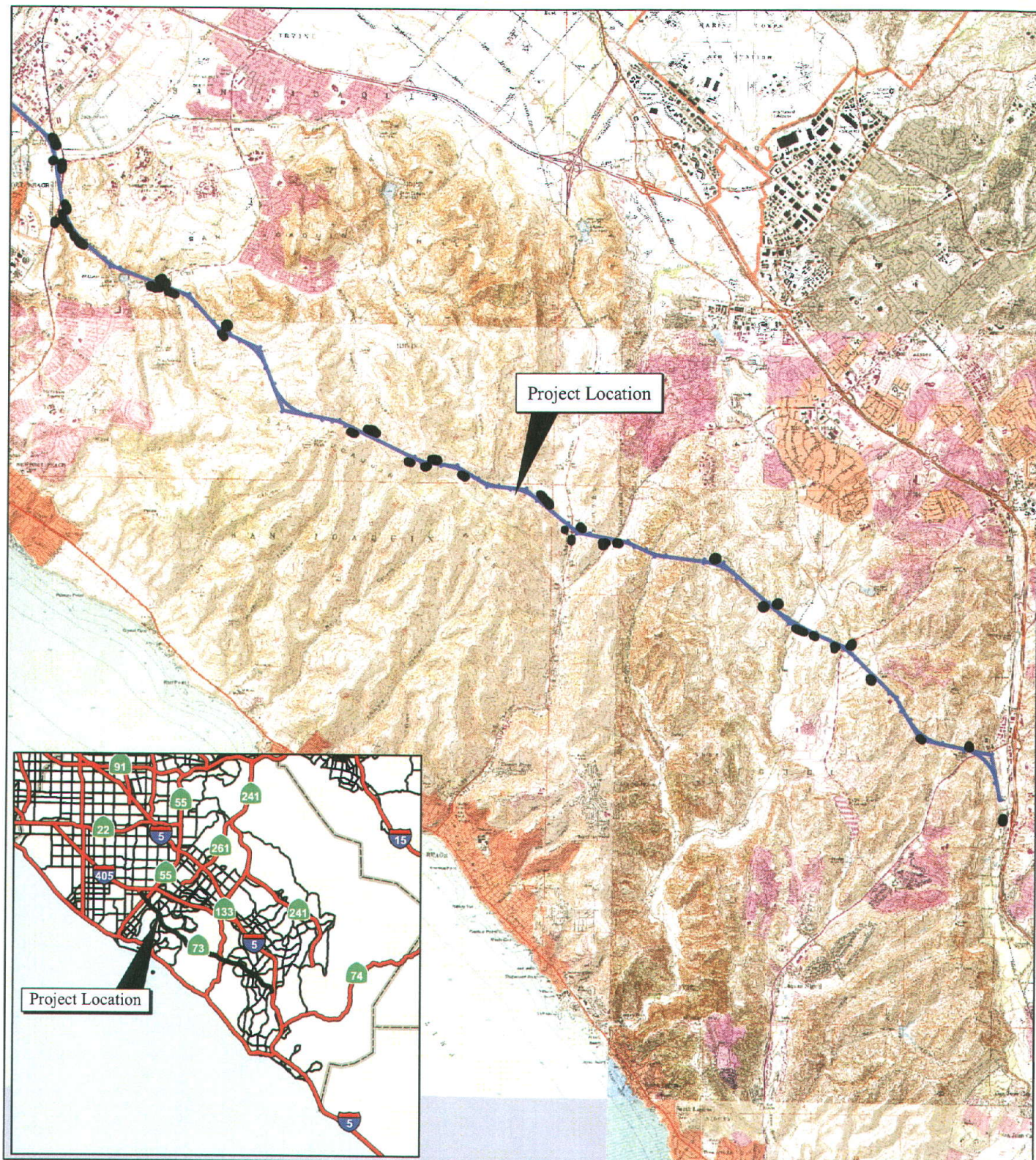
The biological study area (BSA) is approximately 15 linear miles along the SR-73 corridor, reaching from approximately the I-5 interchange (southern limit) to Jamboree Road (northern limit) and extending through the cities of Laguna Niguel, Aliso Viejo, Laguna Beach, Newport Beach, and Irvine, California. Specifically, the survey extends from approximate Latitude 33 39'11.837"N, Longitude 117 51'42.366"W to Latitude 33 32'46.181"N, Longitude 117 40'30.032"W within Sections 1, 5, 6, 9, 10, 14, 15, 18, 19, 20, 28, 34, and 35, Township 6 and 7 South, Range 8 and 9 West, as shown on the *San Juan Capistrano, Laguna Beach, and Tustin, California 7.5-minute series United States Geological Survey (USGS) topographic maps*.

The project proposes to reduce sedimentation runoff into 39 storm water basins along SR-73 between Jamboree Road and the I-5/SR-73 interchange with Best Management Practices (BMPs) by reducing erosion of internal basin slopes, erosion of adjacent slopes, bare areas within the median, or any areas identified within the Caltrans right-of-way as source contributors that drain into basins.

REGULATORY BACKGROUND

United States Army Corps of Engineers

The ACOE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and nonwetland bodies of water that meet specific criteria. ACOE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. The following definition of waters of the United States is taken from the discussion provided at 33 Code of Federal Regulations (CFR) 328.3.



LSA

LEGEND

- Basin Location
- Project Alignment

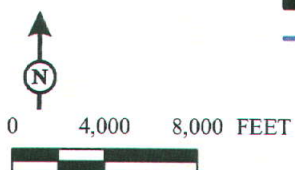


FIGURE 1

SR-73 Basin Sedimentation Project

Project Location Map

SOURCE: USGS 7.5' QUAD - LAGUNA BEACH ('81); SAN JUAN CAPISTRANO ('81); TUSTIN ('81); CALIF.
I:\CDT0807\GIS\Proj_Loc.mxd (12/1/2008)

"The term waters of the United States means:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce . . . ;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation or destruction of which could affect interstate or foreign commerce . . . ;
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition; and
- (5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section."

The ACOE typically regulates as waters of the United States any body of water displaying an ordinary high water mark (OHWM). ACOE jurisdiction over nontidal waters of the United States extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area." (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

As discussed above, ACOE regulatory jurisdiction under Section 404 of the CWA is founded on a connection between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. In the past, an indirect nexus could potentially be established if isolated waters provided habitat for migratory birds, even in the absence of a surface connection to a navigable water of the United States. The 1984 rule that enabled the ACOE to expand jurisdiction over isolated waters of this type became known as the Migratory Bird Rule. However, on January 9, 2001, the United States Supreme Court narrowly limited the ACOE jurisdiction of "nonnavigable, isolated, intrastate" waters based solely on the use of such waters by migratory birds and particularly, the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. The Court's ruling derives from the case *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178 (SWANCC). The Supreme Court determined that the ACOE exceeded its statutory authority by asserting CWA jurisdiction over an abandoned sand and gravel pit in northern Illinois that provides habitat for migratory birds.

In 2006, the United States Supreme Court further considered the ACOE jurisdiction of "waters of the United States" in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. On June 5, 2007, the ACOE

issued guidance regarding the Rapanos decision. This guidance states that the ACOE will continue to assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically three months), and wetlands that directly abut relatively permanent tributaries. The ACOE will determine jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent and wetlands adjacent to nonnavigable tributaries that are not relatively permanent only after making a significant nexus finding.

The ACOE regulations (CFR Section 328.3, Definitions) states that "Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the United States."

Furthermore, the preamble to ACOE regulations (Preamble Section 328.3, Definitions) states that the ACOE does not generally consider the following waters to be waters of the United States. The ACOE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Nontidal drainage and irrigation ditches excavated on dry land
- Artificially irrigated areas that would revert to upland if the irrigation ceased
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

Waters found to be isolated and not subject to CWA regulation are often still regulated by the RWQCB under the State Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Wetlands

Wetland delineations for Section 404 purposes must be conducted according to the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Supplement) (ACOE 2006) and the Corps of Engineers 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory 1987). Where there are differences between the two documents, the Regional Supplement takes precedence over the 1987 Manual.

The ACOE and United States Environmental Protection Agency (EPA) define wetlands as follows:

"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soils indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes have lasted more than a few days or have occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding or highly ephemeral stream systems. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas. Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The Regional Supplement provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation. Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988), published by the United States Fish and Wildlife Service (USFWS). Each species on the list is rated according to a wetland indicator category, as shown in the table provided below. To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated as OBL, FACW, or FAC).

Hydrophytic Vegetation

Category		Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability > 99 percent)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99 percent)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66 percent)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67–99 percent)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability > 99 percent)

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately); when more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the ACOE recommends the use of the "50/20" rule (also known as the dominance test) from the Regional Supplement for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species composing 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a sampling plot. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, ACOE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (ACOE 2006). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibit morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils.¹ Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.² Soils are considered likely to meet the definition of a hydric soil when one or more of the following criteria are met:

1. All Histels except Folistels and Histosols except Folists;
2. Soils that are frequently ponded for long duration or very long duration³ during the growing season; or
3. Soils that are frequently flooded for long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. While saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters (cm), below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria, a National List of Hydric Soils was created from the National Soil Information System (NASIS) database and is updated annually.

¹ The hydric soil definition and criteria included in the 1987 Manual are obsolete. Users of the Manual are directed to the United States Department of Agriculture (USDA) Natural Resources Conservation Service Web site for the most current information on hydric soils.

² Current definition as of 1994 (FR July 13, 1994).

³ Long duration is defined as a single event ranging from 7 to 30 days; very long duration is defined as a single event that lasts longer than 30 days.

The Regional Supplement has a number of field indicators that may be used to identify hydric soils. The Natural Resources Conservation Service (NRCS) (2003) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, the accumulation of organic matter, and the reduction, translocation and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology. Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (Environmental Laboratory 1987). The wetland hydrology parameter is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (ACOE 2006).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators that are commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

California Department of Fish and Game

The CDFG, through provisions of the California Fish and Game Code (Sec. 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFG.

In obtaining CDFG agreements, the limits of wetlands are not typically determined. The reason for this is that the CDFG generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mulefat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with ACOE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFG jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet ACOE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

Regional Water Quality Control Board

The California RWQCB is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those of the ACOE (i.e., waters of the United States, including any wetlands). RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act.

METHODOLOGY

The fieldwork for this evaluation was conducted by LSA biologists Corey Knips, Ingri Quon, Angela Roundy, and Leo Simone. The field work was conducted on November 5, 6, 7, 10, and 18, 2008. All 39 basins within the study area were surveyed on foot for both federal and State jurisdictional areas. Appendix A shows the locations of the 39 basins associated with SR-73. The boundaries of the potential jurisdictional areas were observed in the field and mapped on 26 aerial photographs (each scale 1 inch = approximately 300 feet [ft]), which together show the entire study area.

Areas suspected of potential jurisdiction were evaluated according to ACOE, CDFG, and RWQCB criteria. Basins 1156R, 1180R, 1183L, and 1194R were examined on November 5, 2008. Due to the presence of hydrophytic vegetation, these basins were suspected of potentially being wetland waters. After consulting with Jae Chung of the ACOE, it was determined that because these basins were constructed on dry land for the sole purpose of collecting and treating runoff water from SR-73 and are separate from any ACOE jurisdictional waters, they would not be subject to ACOE regulatory authority.

Hydrophytic vegetation was also present within Basins 583L, 604R, 613L, 780R, 1080R, 1133L, 1149L, and 1151L. However, these basins were analyzed after consulting with Jae Chung of the ACOE, and because there is clear evidence that all of these basins were constructed on dry land for the sole purpose of collecting and treating runoff water from SR-73 and are separate from any ACOE jurisdictional waters, they would not be under ACOE regulatory authority. Therefore, soil pits were not dug at these basins.

Hydrophytic vegetation and standing water were present in Basins 757 and 765L. A soil pit was dug at each of these locations because of their proximity to a large wetland area associated with an unnamed perennial creek located on the east side of El Toro Road.

Measurements of potential federal and State jurisdictional areas mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Areas supporting species of plant life potentially indicative of wetlands were evaluated according to routine wetland delineation procedures described in the Regional Supplement. Representative sample plots were selected and examined in the field in those areas where wetland jurisdiction was in question or needed to be confirmed. The locations of sample plots and the potential jurisdictional areas are shown in Appendix A. At each sample plot, the dominant and subdominant plant species were identified and their wetland indicator status noted (Reed 1988). When possible, a small sample pit (approximately 24 inches deep) was dug at each plot in order to examine soil characteristics and composition. Soil matrix colors were classified according to the Munsell Soil Color Charts (Munsell Color 2000). Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators, were noted. General site characteristics were also noted. Standard data forms were completed for each sample plot; copies of these data forms are included in Appendix B of this report. Potential ACOE, CDFG, and RWQCB jurisdictional and nonjurisdictional areas within the project area are presented as Table A in Appendix C. Representative site photos are located in Appendix D.

RESULTS

The proposed project consists of 39 storm water collection basins along SR-73 between the I-5/SR-73 interchange and Jamboree Road, a distance of approximately 15 miles. The majority of the basins within the project area are concrete-lined. The remaining basins are composed of natural earthen bottoms, riprap bottoms, or a combination of these. Basin 765L, located across El Toro Road from an unnamed tributary, is the only storm water basin identified (Appendix A, Sheet 11 of 30) where potential ACOE, CDFG, and RWQCB jurisdiction occurs.

Potential ACOE Jurisdiction

Establishing the Potential for ACOE Jurisdiction. Per (CFR Section 328.3, Definitions) wetlands adjacent to waters (other than waters that are themselves wetlands) and/or waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11 [m]) are not waters of the United States. Therefore, the ACOE does not assert jurisdiction over these waters.

Additionally, the ACOE typically does not assert jurisdiction over "artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing" (Preamble Section 328.3).

Thirty-eight of the storm water basins within the study area were constructed on dry land in upland areas for the sole purpose of collecting and treating runoff and nuisance flows from SR-73 and adjacent areas. In addition, these areas are separated from any ACOE jurisdictional waters. For these reasons, it is concluded with confidence that these 38 basins are not potentially subject to ACOE jurisdiction.

Basin 765L, however, appears to have a direct hydrologic connection to an unnamed drainage situated across El Toro Road from the basin. The unnamed drainage is tributary to Laguna Canyon Creek. Laguna Canyon Creek eventually flows into the Pacific Ocean, thereby establishing a nexus to interstate commerce. Because this basin abuts relatively permanent water a significant nexus determination by the ACOE will not be required. However, the ACOE might determine that this basin is not jurisdictional because it is nevertheless a treatment pond.

Potential Wetland Waters of the United States. Basin 765L is the only basin within the study area where potential ACOE jurisdiction occurs. This basin is adjacent to an unnamed perennial creek via a connection under El Toro Road. The basin appears to be at a similar elevation as the unnamed perennial stream, and during high flow it appears that water flows back and forth between the basin and the creek. The basin appears to remain inundated or saturated long enough to meet ACOE wetland criteria, and is adjacent to a relatively permanent tributary to a traditional navigable body that also appears to meet the ACOE wetland criteria. The total acreage of potential ACOE wetland waters within the study area is 1.32 acres (ac). See Appendix A for details regarding the location of this potential wetland area. Additional discussion regarding wetland criteria is provided in the description for Basin 765L below.

Potential Nonwetland Waters of the United States. As described above, ACOE typically does not assert jurisdiction over man-made storm water collection basins excavated on dry land. Basin 765L is the only basin that is adjacent to a traditional navigable body of water and it was determined to meet ACOE wetland criteria. Therefore, there are no potential ACOE nonwetland waters of the United States within the study area. See Appendix A for details regarding the locations of the potentially nonjurisdictional basins.

Basin Descriptions

Basin 457L. Basin 457L is a small rectangular-shaped storm water collection basin located west of SR-73 between the I-5/SR-73 interchange and Pas de Colinas (Sheet 1, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs, such as salt heliotrope (*Heliotropium curassavicum*), telegraph weed (*Heterotheca grandiflora*), and black mustard (*Brassica nigra*). The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 506R. Basin 506R is a rectangular-shaped storm water collection basin located north of SR-73 and west of Crown Valley Parkway (Sheet 2, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. The basin is sparsely vegetated with upland species consisting of nonnative grasses and ruderal forbs, including black mustard, foxtail chess (*Bromus madritensis* ssp. *rubens*), and tree tobacco (*Nicotiana glauca*). The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 535L. Basin 535L is a rectangular-shaped storm water collection basin located south of SR-73 and approximately 1,800 ft west of Green Field Drive (Sheet 3, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. The basin is vegetated with upland species consisting of nonnative grasses and ruderal forbs, including Russian thistle (*Salsola tragus*), foxtail chess, and doveweed (*Croton setigerus*). The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 583L. Basin 583L is a triangular-shaped, concrete-lined storm water collection basin. The basin is located to the south of SR-73, and situated adjacent to the west side of Moulton Parkway (Sheet 5, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by ruderal species. Opportunistic species such as common cocklebur (*Xanthum strumarium*; FAC), curly dock (*Rumex crispus*; FACW), and cattail (*Typha* sp.; OBL) were observed growing in an area of standing water that accumulated over the impermeable concrete-lined basin bottom. The remainder of the vegetation within the basin primarily consists of upland species. A soil pit to determine if the area

satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain water. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 604R. Basin 604R is an oval-shaped storm water collection basin. The basin is located to the north of SR-73, and east of La Paz Road (Sheet 6, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure, and sheet flows across the basin. Vegetation growing within the basin is dominated by ruderal species. A small patch of fresh water marsh was observed near the basin inlet structure. Vegetation growing in this area of standing water included common cocklebur (FAC), curly dock (FACW), and rabbitfoot grass (*Polypogon monspeliensis*, FACW). The remainder of the vegetation within the basin consists primarily of upland nonnative grassland and ruderal species. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain water. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 613L. Basin 613L is a triangular-shaped basin located south of SR-73 and west of La Paz Road (Sheet 6, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by nonnative annual grasses. Opportunistic species, including marsh fleabane (*Senecio congestus*; OBL) and tamarisk (*Tamarix* sp.; FACW), were observed growing in the wetter areas of the basin. The remainder of the vegetation within the basin consists primarily of upland species. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain water. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 630L. Basin 630L is a small off-line bypass storm water collection basin. The basin is located south of SR-73, west of Alicia Parkway, and east of Aliso Creek (Sheet 6, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure. There was no sediment or vegetation observed within this concrete structure. The basin was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 635L. Basin 635L is a narrow west-to-east-draining storm water collection basin. The basin is located south of SR-73 and east of Aliso Creek Road (Sheets 6 and 7, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure, and sheet flows across the basin. Vegetation growing within the basin is dominated by upland ruderal and ornamental species, including Russian thistle, foxtail chess, and prostrate acacia (*Acacia redolens*). The basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 654R. Basin 654R is an oval-shaped storm water collection basin. The basin is located north of SR-73 and east of Aliso Creek Road (Sheet 7, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by upland ruderal and ornamental species, including Russian thistle, foxtail chess, and Sydney golden wattle. The basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 659L. Basin 659L is an oval-shaped storm water collection basin. The basin is located south of SR-73 and west of Aliso Creek Road (Sheet 7, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by upland ruderal and nonnative grasses, including Russian thistle, foxtail chess, and tocolote (*Centaurea melitensis*). The basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 696R. Basin 696R is an oval-shaped storm water collection basin. The basin is located north of SR-73 and east of Glenwood Drive (Sheet 9, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by upland ruderal and nonnative grasses, including Russian thistle, foxtail chess, and telegraph weed. The basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 757. Basin 757 is a riprap-lined oval-shaped storm water collection basin that receives runoff collected from SR-73 via a 36-inch inlet structure. It is located south of SR-73, east of El Toro Road, and approximately 500 ft north of an unnamed perennial creek (Sheet 11, Appendix A). A sediment-filled riprap-lined pilot channel extends from the inlet structure near the eastern end of the basin to the outlet structure located near the west end of the basin. Hydrophytic vegetation consisting of cattail (OBL), rabbitfoot grass (FACW), and African brass-buttons (*Cotula coronopifolia*; OBL) was observed growing within the ponded portions of the concrete-lined pilot channel and adjacent areas. The remainder of the vegetation within the basin consists primarily of upland ruderal species. Due to the presence of hydrophytic vegetation and standing water (there was a rain event one day prior to the survey), a soil pit (SP 6) was taken to determine if the area satisfies wetland criteria. Soils consisting of clay loam were saturated and met the hydric soils indicator requirements outlined in the Regional Supplement (Munsell Matrix – Gleyed 1 2-5/10Y). It should be noted that most of the basin bottom is lined with riprap, thereby providing an impermeable surface that most likely accounted for the ponded water observed within the basin. Additionally, the accumulation of soil in the basin appears to be the result of erosion from adjacent upland areas. Although the basin met all three wetland criteria parameters (hydric soils, hydrophytic vegetation, and wetland hydrology) the basin was separated from, and at a significantly higher elevation than the unnamed perennial creek located downslope of the basin. Therefore, it is LSA's opinion that because this basin is separate from any ACOE jurisdictional waters that it should not be considered jurisdictional by the ACOE.

Basin 765L. Basin 765L is a triangular-shaped storm water collection basin located south of SR-73 and adjacent to the west side of El Toro Road (Sheet 11, Appendix A). Vegetation within the basin consists entirely of hydrophytes, including cattail, Goodding's black willow (*Salix gooddingii*; OBL), arroyo willow (*Salix lasiolepis*; FACW), western cottonwood (*Populus fremontii*; FACW), and mulefat (*Baccharis salicifolia*; FACW). The basin appears to be hydrologically connected to a large wetland area associated with an unnamed perennial creek located on the east side of El Toro Road across from the basin, and during high flow it appears that water flows back and forth between the basin and the creek. Because of the prevalence of hydrophytic vegetation and saturated soil throughout the basin, a soil pit (SP 5) was taken to determine if the area satisfies wetland criteria. The basin consists of soils made up of sandy clay loam. The gleyed soils within Basin 765L exhibit clear hydric soil characteristics. Soils examined in SP 5 do not fit into the technical descriptions for the hydric soil indicators listed in the final Regional Supplement. However, the existence of hydrophytic vegetation and observed hydrology in this basin, in addition to the presence of gleyed soils, supports the conclusion that this area meets the hydric soils wetland criteria. Therefore, all three wetland parameters (hydric soils, hydrophytic vegetation, and wetland hydrology) are met within this basin. Based on the hydrologic connection and the abutting position relative to existing jurisdictional waters, it is LSA's opinion that this basin may be considered jurisdictional by the ACOE.

Basin 780R. Basin 780R is a triangular-shaped storm water collection basin located north of SR-73 and east of Laguna Canyon Road (Sheets 11 and 12, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists mostly of upland nonnative grasses with scattered mulefat. A small stand of mulefat and cattails was observed in the southern portion of the basin. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction, was constructed on dry land to collect and retain runoff water from SR-73, and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 785L. Basin 785L is a small rectangular-shaped storm water collection basin situated on a terraced hillside located upslope of Laguna Canyon Creek, south of SR-73 and west of Laguna Canyon Road (Sheet 12, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs, including telegraph weed, black mustard, and foxtail chess. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 789L. Basin 789L is a small oval-shaped storm water collection basin located south of SR-73 and west of Laguna Canyon Road (Sheet 12, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses, with scattered coastal sage scrub growing mostly on the banks. The basin was constructed on dry land to collect and retain runoff water

from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 808R. Basin 808R is a long linear-shaped storm water collection basin located north of SR-73 and approximately 1,600 ft west of Laguna Canyon Road (Sheets 12 and 13, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses on the basin bottom, with coastal sage scrub growing mostly on the banks. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 859L. Basin 859L is an oval-shaped storm water collection basin located south of SR-73 (Sheet 14, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 878R. Basin 878R is an oval-shaped storm water collection basin located north of SR-73 and approximately 1,600 ft east of the toll plaza (Sheet 15, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs with scattered mulefat. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 883L. Basin 883L is a kidney-shaped storm water collection basin located south of SR-73 and approximately 1,500 ft east of the toll plaza (Sheet 15, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 893L. Basin 893L is a small oval-shaped storm water collection basin located south of SR-73 and east of the toll plaza (Sheet 15, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 922R. Basin 922R is a triangular-shaped storm water collection basin located north of SR-73 (Sheet 16, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 930L. Basin 930L is a rectangular-shaped storm water collection basin located south of SR-73 (Sheet 16, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated by nonnative grasses. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1032L. Basin 1032L is a rectangular-shaped storm water collection basin located south of SR-73 and west of Newport Coast Drive (Sheet 20, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs and shrubs, with scattered mulefat. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1032R. Basin 1032R is an oval-shaped storm water collection basin located north of SR-73 and east of Newport Coast Drive (Sheet 20, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses, with a few isolated plants of the coastal sage scrub community. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1075L. Basin 1075L is a rectangular-shaped storm water collection basin located south of SR-73 and east of Bonita Canyon Road (Sheet 21, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin from north to south. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses and ruderal forbs and shrubs with scattered mulefat. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1076R. Basin 1076R is a triangular-shaped storm water collection basin located north of SR-73 and east of Bonita Canyon Road (Sheet 21, Appendix A). Runoff from SR-73 is collected within the

basin via a 36-inch inlet structure and sheet flows across the basin from north to south. Vegetation in this basin consists entirely of upland species dominated primarily by nonnative grasses, with a few isolated mulefat plants. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1080R. Basin 1080R is a concrete-lined storm water collection basin. The basin is located north of SR-73 and east of Bonita Canyon Road (Sheet 21, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation is absent within the basin except for a small remnant of hydrophytic vegetation consisting of cattail and willow growing in soil that accumulated at the basins outfall structure. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain water. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1081L. Basin 1081L is a triangular-shaped storm water collection basin located south of SR-73 and east of Bonita Canyon Road (Sheet 21, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin from north to south. Vegetation in this basin consists entirely of upland species dominated primarily by Russian thistle and nonnative grasses, with a few isolated mulefat plants. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1085L. Basin 1085L is a small off-line bypass storm water collection basin. The basin is located adjacent to and south of a tributary of Bonita Creek, south of SR-73, and west of Bonita Canyon Road (Sheets 21 and 22, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure. Vegetation is absent within most of the basin. Remnant vegetation within the basin consists entirely of ruderal upland species. Hydrophytic vegetation was not observed in the basin. The basin was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1133L. Basin 1133L is an oval-shaped, south-to-north-draining concrete-lined storm water collection basin. The basin is located to the west of SR-73, and south of Bison Avenue (Sheet 23, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure, and sheet flows across the basin. Vegetation growing within the basin is dominated by ruderal species. Opportunistic species such as rabbitfoot grass (FACW) and curly dock (FACW) were observed growing in the wet soil that accumulated over the impermeable concrete-lined basin bottom. The remainder of the vegetation within the basin consists primarily of upland species. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1137L. Basin 1137L is a small triangular-shaped storm water collection basin located west of SR-73 and north of Bison Avenue (Sheets 23 and 24, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin from north to south. Vegetation in this basin consists entirely of upland species dominated primarily by Russian thistle and nonnative grasses, with a few isolated mulefat plants. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1143L. Basin 1143L is a small oval-shaped storm water collection basin located west of SR-73 and south of MacArthur Boulevard (Sheets 23 and 24, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin consists entirely of upland ruderal species dominated primarily by nonnative grasses. The basin was constructed on dry land to collect and retain runoff water from SR-73 and is separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1149L. Basin 1149L is an oval-shaped storm water collection basin located west of MacArthur Boulevard (Sheet 24, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation in this basin primarily consists of upland species dominated by nonnative grasses and forbs. Common rush (*Juncus*; FACW) occupied the central portion of the basin. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain runoff from SR-73. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1151L. Basin 1151L is a narrow, south-to-north-draining concrete-lined storm water collection basin. The basin is located to the west of SR-73, and situated partially under the MacArthur Boulevard overpass (Sheet 24, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure and sheet flows across the basin. Vegetation growing within the basin is dominated by ruderal species. Opportunistic species such as rabbitfoot grass (FACW) and curly dock (FACW) were observed growing in the wet soil that accumulated over the impermeable concrete-lined basin bottom. The remainder of the vegetation within the basin consists primarily of upland species. A soil pit to determine if the area satisfies wetland criteria was not taken because the basin is separated from any waters currently under ACOE jurisdiction and was constructed on dry land to collect and retain water. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1156R. Basin 1156R is a south-to-north-draining, concrete-lined rectangular-shaped storm water collection basin. The basin is located to the east of SR-73 and partially under the MacArthur Boulevard overpass (Sheet 24, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure. A sediment filled concrete-lined pilot channel extends from the inlet structure near the southern end of the basin to the outlet structure located near the north end of the basin.

Hydrophytic vegetation consisting of cat-tail (OBL), rabbitfoot grass (FACW) and African brass-buttons (OBL) was observed growing within the ponded portions of the concrete-lined pilot channel and adjacent areas. The remainder of the vegetation within the basin consists primarily of upland ruderal species. Due to the presence of hydrophytic vegetation and a significant amount of standing water (rain event one day prior to survey), a soil pit (SP 4) was taken to determine if the area satisfies wetland criteria. Soils were saturated and consisted of sandy clay loam and sandy loam. The soils appeared to meet the hydric soils indicator requirements outlined in the Regional Supplement (Munsell Matrix – Gleyed 1 N 2.5/Black; 10 Y 3/1). It should be noted that most of the basin bottom is concrete-lined, thereby providing an impermeable surface that most likely accounted for the ponded water observed within the basin. Additionally, the accumulation of soil in the basin appears to be the result of erosion from adjacent upland areas. Although the basin met all of the criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) it is separated from any waters currently under ACOE jurisdiction. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1180R. Basin 1180R is a south-to-north-draining, concrete-lined rectangular shaped storm water collection basin. The basin is located east of SR-73, west of MacArthur Boulevard, and south of University Drive (Sheet 25, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure. No OHWM was visible within the basin; however, a concrete-lined pilot channel extends approximately 200 ft, from the inlet structure near the southern end of the basin to the outlet structure located near the north end of the basin. Vegetation within the basin consists primarily of upland ruderal plants. A small stand of potential hydrophytic vegetation consisting of mulefat (FACW), arroyo willow (FACW), curly dock (FACW), and African brass-buttons (OBL) was observed in the area of ponded water near the basin's inlet structure. Due to the presence of potential hydrophytic vegetation and a small amount of standing water (rain event one day prior to survey), a soil pit (SP 3) was taken to determine if the area satisfies wetland criteria. Soils consisted of sandy clay loam. The soils failed to meet any hydric soils indicators outlined in the Regional Supplement (Munsell Matrix – 10 YR 4/2). Most of the basin bottom is concrete-lined, thereby providing an impermeable surface that accounted for the ponded water observed within the basin. The accumulation of soil in the basin appears to be the result of erosion from adjacent upland areas. The basin did not meet any of the criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) in order to be classified as a jurisdictional wetland. This basin also lacked any connection or nexus to any navigable water or tributary to any waters subject to ACOE jurisdiction. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1183L. Basin 1183L is a west-to-east-oriented, concrete-lined rectangular-shaped storm water collection basin. The basin is located partially under the southbound side of SR-73, north of University Drive and south of San Diego Creek (Sheets 25, Appendix A). Runoff from SR-73 is collected within the basin via a 36-inch inlet structure. An OHWM was not observed within the basin; runoff appears to sheet-flow across the basin in a easterly direction. Vegetation within the basin consists primarily of upland ruderal plants with small patches of mulefat (FACW). Because of the presence of potential hydrophytic vegetation and a small amount of standing water (there was a rain event one day prior to the survey) on the central portion of the basin, a soil pit (SP 2) was taken to determine if the area satisfies wetland criteria. Soils consisted of sandy clay loam. The soils failed to meet any hydric soils indicators outlined in the Regional Supplement (Munsell Matrix – 10 YR 4/2).

Much of the basin bottom is concrete-lined, thereby providing an impermeable surface that accounted for the ponded water observed within the basin. The accumulation of soil in the basin appears to be the result of erosion from adjacent upland areas. The basin did not meet any of the criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) required to be classified as a jurisdictional wetland. This basin also lacked any connection or nexus to any navigable water or tributary to any waters subject to ACOE jurisdiction. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

Basin 1194R. Basin 1194R is a mostly concrete-lined rectangular-shaped storm water collection basin that receives runoff collected from SR-73 via a 36-inch inlet structure. It is located east of SR-73, west of MacArthur Boulevard, south of Jamboree Road, and north of San Diego Creek (Sheets 25 and 26, Appendix A). An OHWM was not visible within the basin. Runoff appears to sheet-flow across the basin from north to south. Vegetation within the basin consists primarily of upland ruderal vegetation with small patches of mulefat (FACW). Because of the presence of potential hydrophytic vegetation and standing water (there was a rain event one day prior to the survey) on the southern portion of the basin, a soil pit (SP 1) was taken to determine if the area satisfies wetland criteria. It consisted of soils made up of sandy clay loam. The soils failed to meet any hydric soils indicators outlined in the Regional Supplement (Munsell Matrix - 7.5 YR 4/3). Much of the basin bottom is concrete-lined, thereby providing an impermeable surface that accounted for the ponded water observed within the basin. The accumulation of soil in the basin appears to be primarily from erosion of adjacent upland areas. Therefore, the basin did not meet any of the criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) required to be classified as a jurisdictional wetland. This basin also lacked any connection or nexus to any navigable water or tributary to any waters subject to ACOE jurisdiction. Therefore, it is LSA's opinion that this basin should not be considered jurisdictional by the ACOE.

CONCLUSIONS

ACOE Jurisdiction

Of the 39 storm water collection basins discussed above, Basin 765L was the only basin considered by LSA to have potential ACOE jurisdiction. Basin 765L appears to have a direct hydrologic connection to the unnamed perennial creek situated across El Toro Road from the basin. The unnamed drainage is tributary to Laguna Canyon Creek. Laguna Canyon Creek eventually flows into the Pacific Ocean. Wetlands adjacent to waters (other than waters that are themselves wetlands) and/or waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA, are not waters of the United States. However, since Basin 765L appears to have a direct hydrologic connection to a perennial creek that also appears to meet the wetland criteria, it is LSA's opinion that this basin may be considered jurisdictional by the ACOE even though it was constructed for and also functions as a treatment pond.

As described above, the remaining basins were constructed on dry land to collect and treat runoff water from SR-73 and are separated from any ACOE jurisdictional waters. Therefore, it is LSA's opinion that these basins should not be considered jurisdictional by the ACOE. The locations of these basins are shown in Appendix A.

CDFG Jurisdiction

The areas satisfying the ACOE jurisdictional criteria for waters of the United States and adjacent wetlands, as described above, are also subject to CDFG jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Of the 39 storm water collection basins discussed above, Basin 765L was the only basin considered by LSA to have potential CDFG jurisdiction. Basin 765L appears to have a direct hydrologic connection to the unnamed perennial creek situated across El Toro Road from the basin. Additionally, riparian vegetation associated with the basin is similar to that of the creek. It is LSA's opinion that this basin is an extension of the creek and thereby may be considered jurisdictional by the CDFG.

The other 38 storm water collection basins were artificially constructed on dry land for the sole purpose of collecting and treating storm water runoff from SR-73 and adjacent areas. It is LSA's opinion that these basins would not be considered jurisdictional since they are separated from any other water bodies under CDFG jurisdiction and clearly are not part of a river, stream, or lake as defined by the CDFG.

The total acreage of CDFG jurisdiction within the study area is 1.32 ac, which is the same total area delineated as ACOE jurisdiction.

RWQCB Jurisdiction

Of the 39 storm water collection basins discussed above, Basin 765L was the only basin considered by LSA to have potential RWQCB jurisdiction per Section 401 of the CWA. Basin 765L appears to have a direct hydrologic connection to an unnamed perennial creek situated across El Toro Road and during high flow it appears that water flows back and forth between the basin and the creek. Therefore, it is LSA's opinion that this basin would be subject to RWQCB regulatory authority per Section 401 of the CWA. Since there is no public guidance on determining RWQCB jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands (three-parameter) and other waters of the United States (OHWM) as recommended by the September 2004 Workplan. The total area of potential RWQCB jurisdiction is 1.32 ac.

As discussed above, the remaining 38 basins were constructed on dry land for the sole purpose of collecting and treating runoff water from SR-73. The storm water collection basins were built pursuant to CWA authorization and are designed to protect waters of the United States and waters of the State as part of the SR-73 project. Therefore, it is LSA's opinion that these basins should not be considered jurisdictional by RWQCB per either Section 401 of the CWA or the Porter-Cologne Act. The locations of these basins are shown in Appendix A. Table A in Appendix C shows the total potential ACOE, CDFG, and RWQCB jurisdictional and nonjurisdictional areas within the project area.

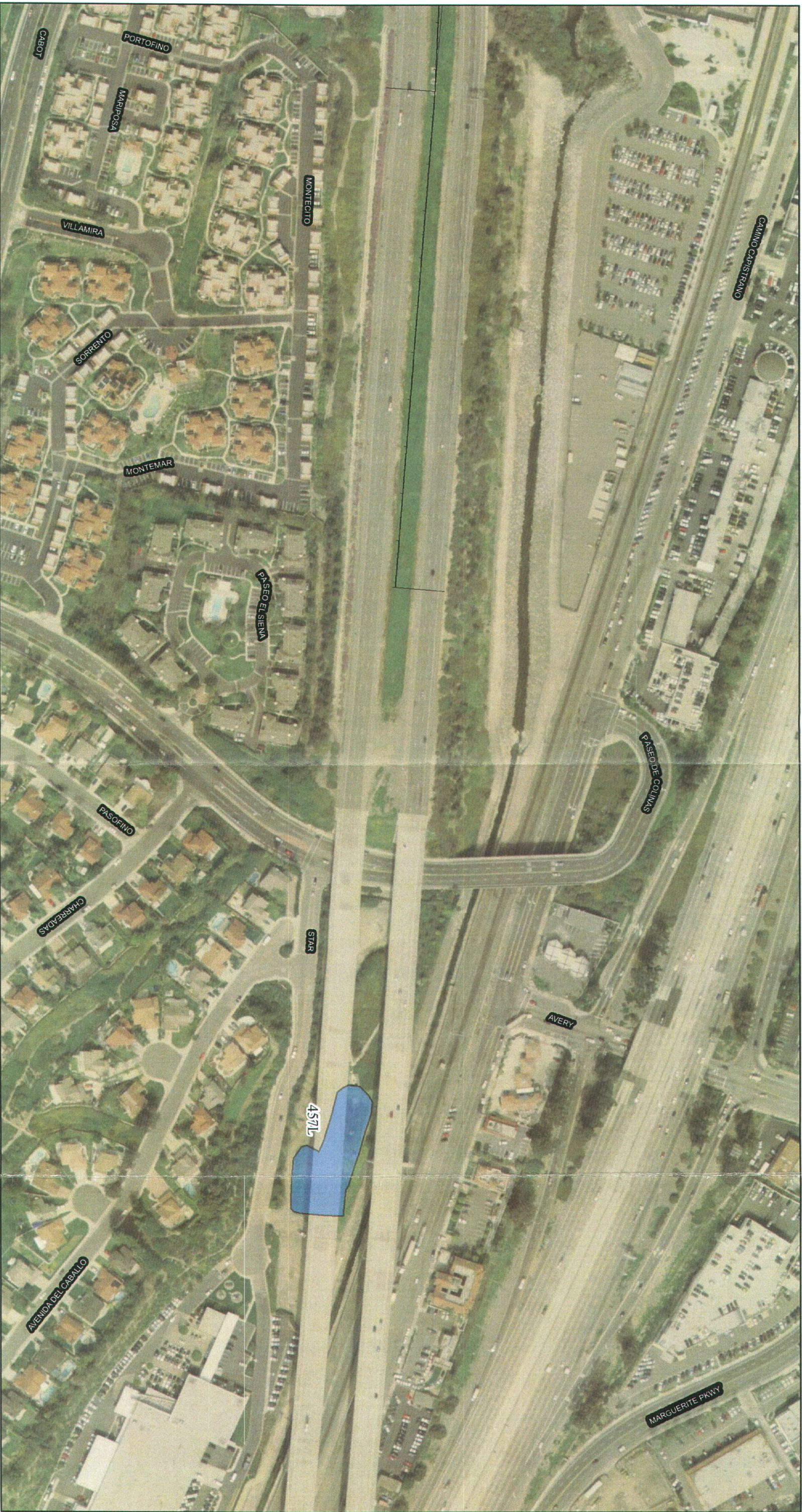
The findings and conclusions presented in this report, including the location and extent of wetlands and other waters subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the ACOE, CDFG, and RWQCB.

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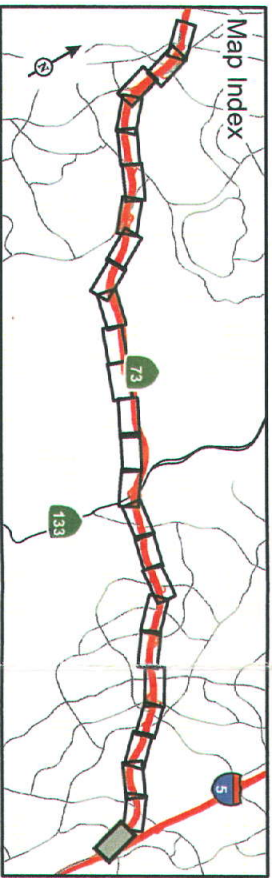
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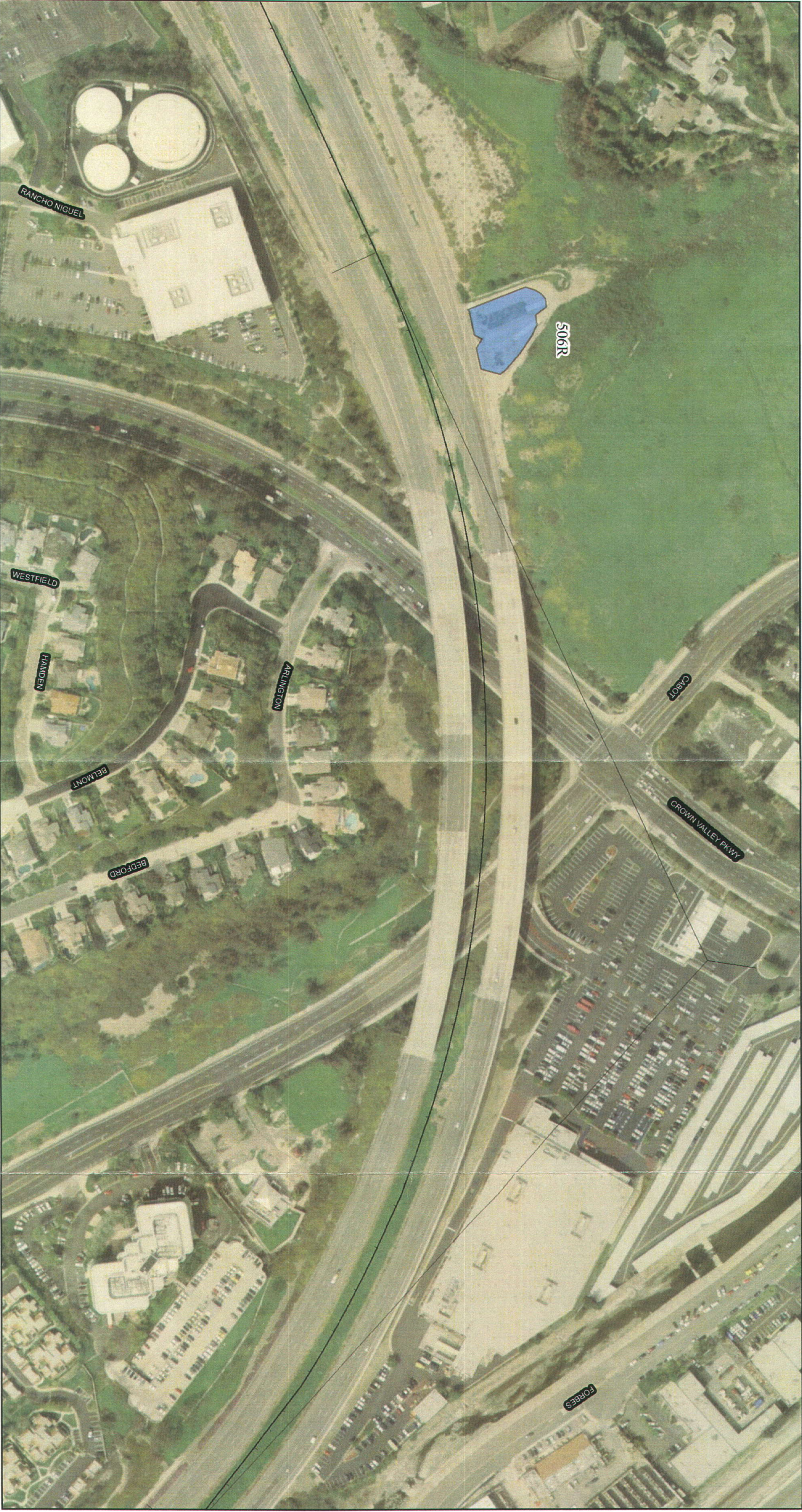
APPENDIX A

BASIN LOCATIONS

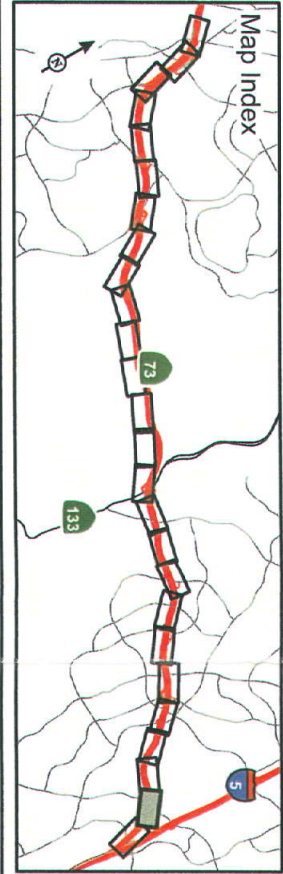


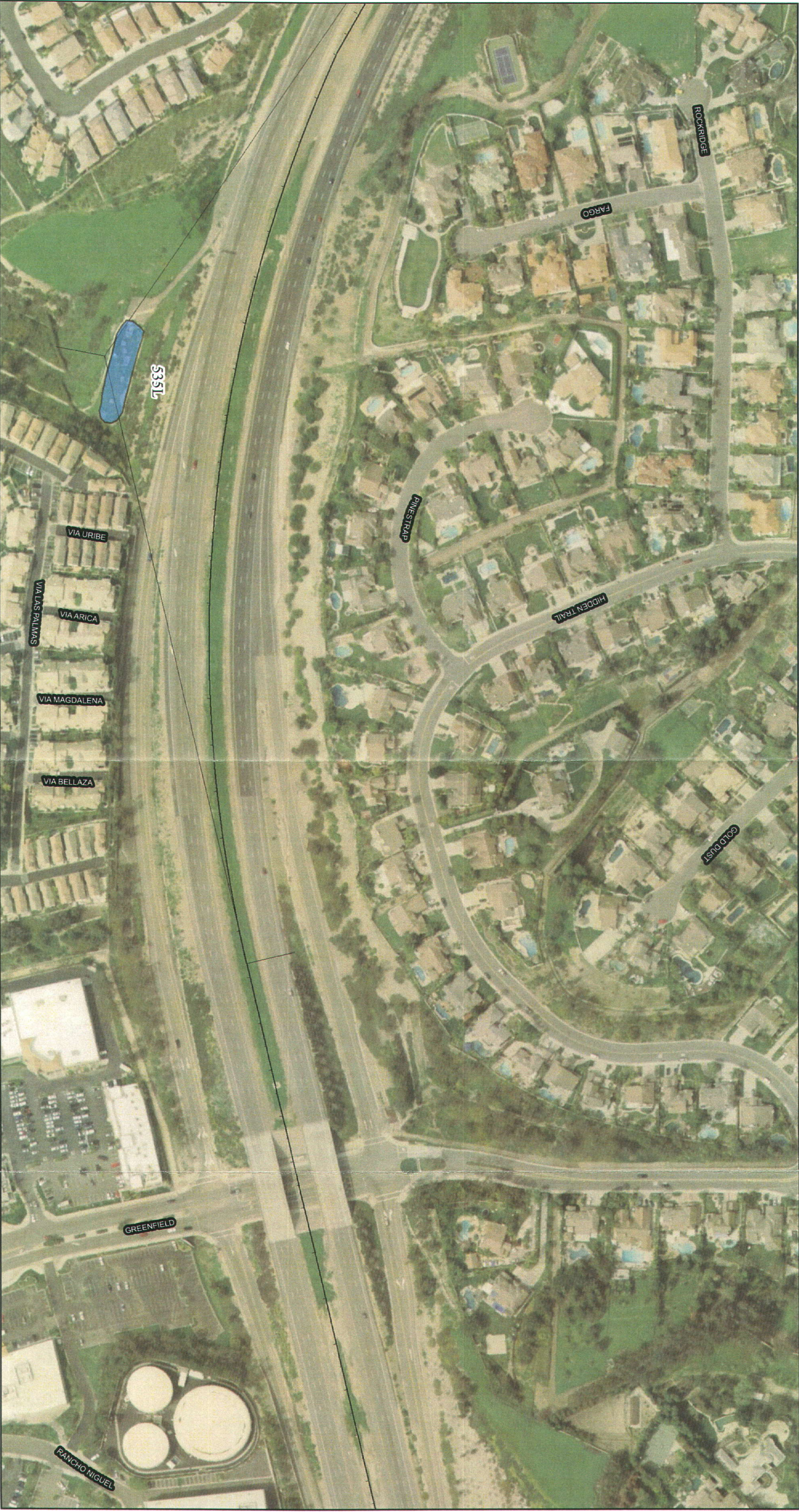
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- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



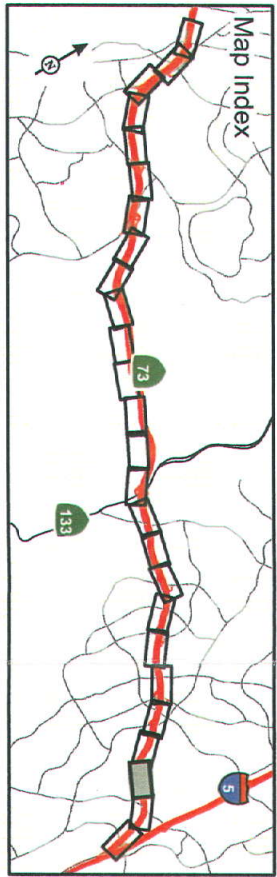


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 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



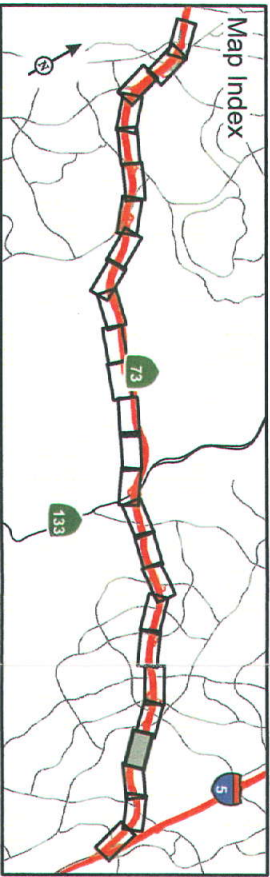


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



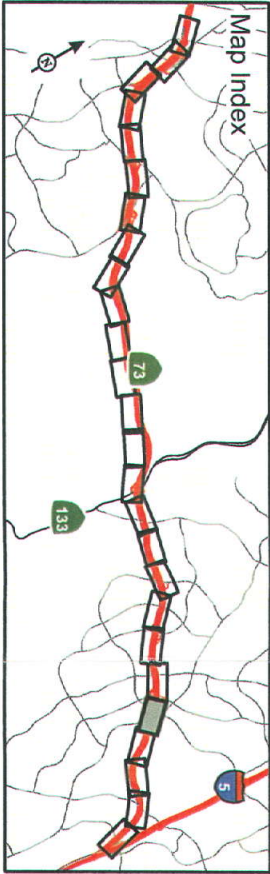


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- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





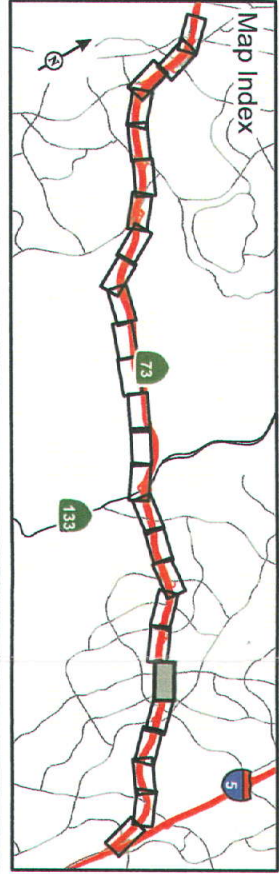
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 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





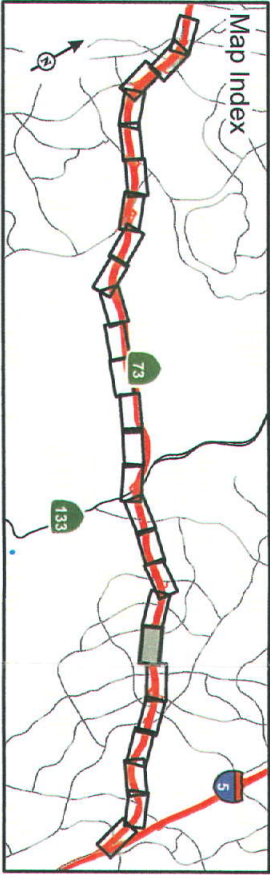
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- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit

0 100 200 Feet



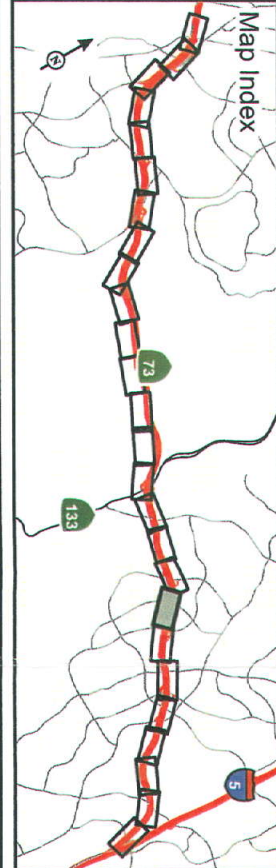


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



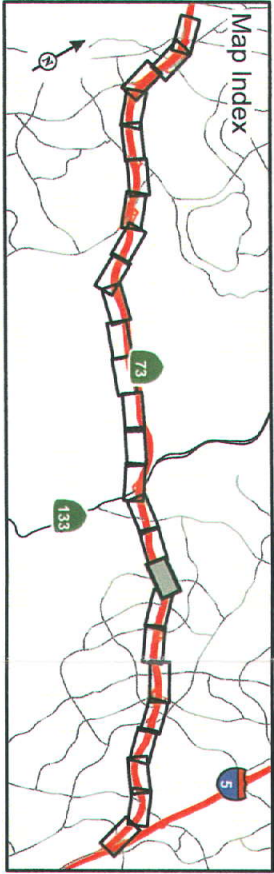


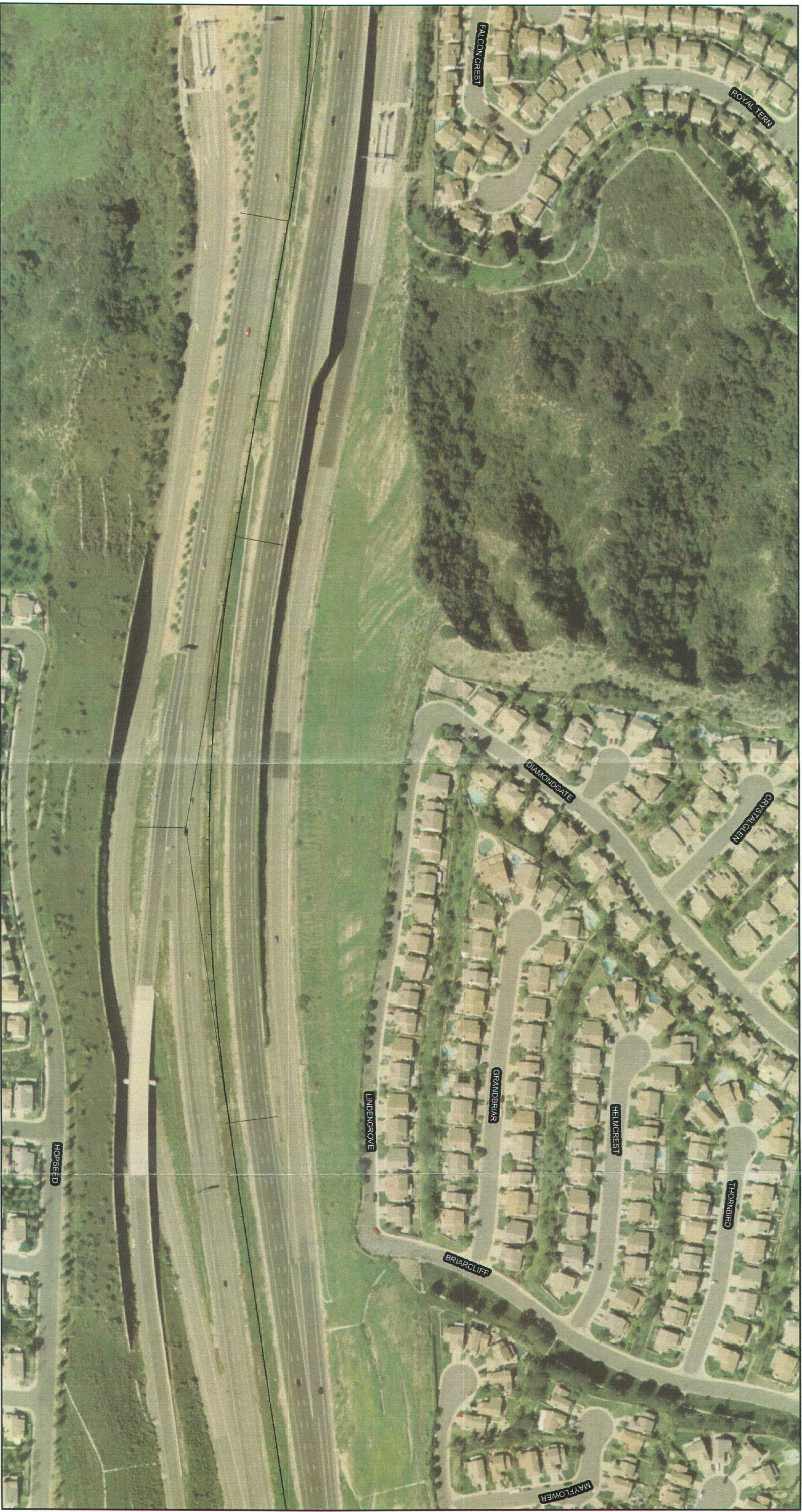
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- Stormwater Basin (Non-Jurisdictional)
- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit

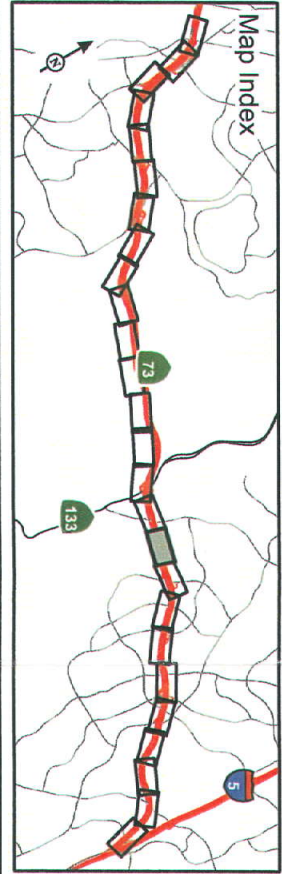
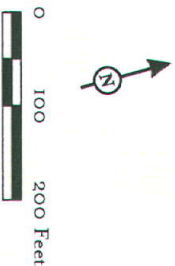
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North Arrow





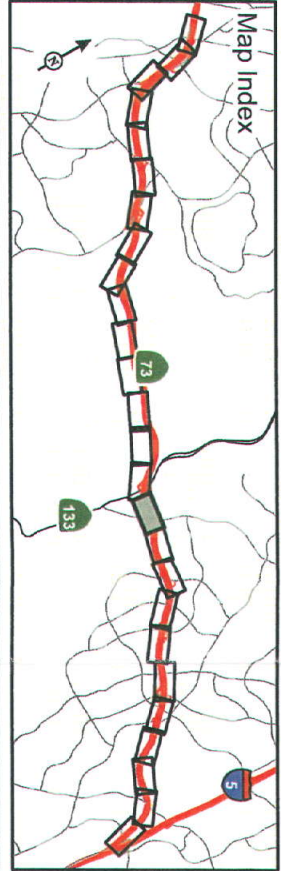
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 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





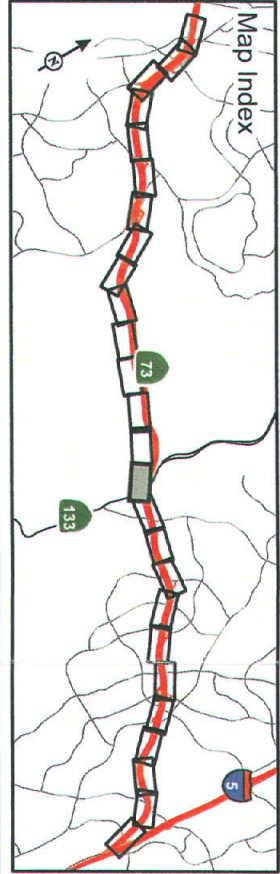
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- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit

0 100 200 Feet



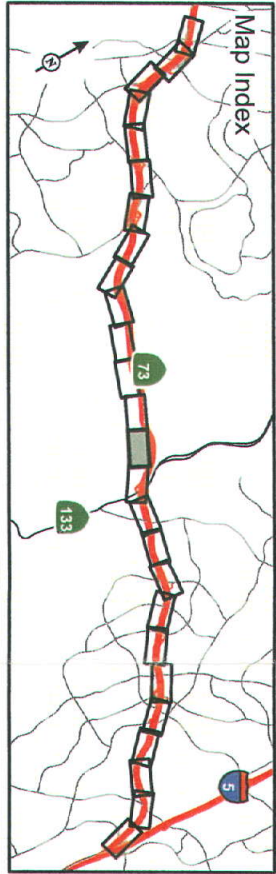
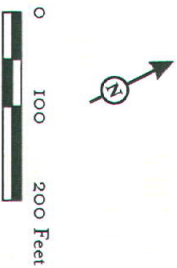


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



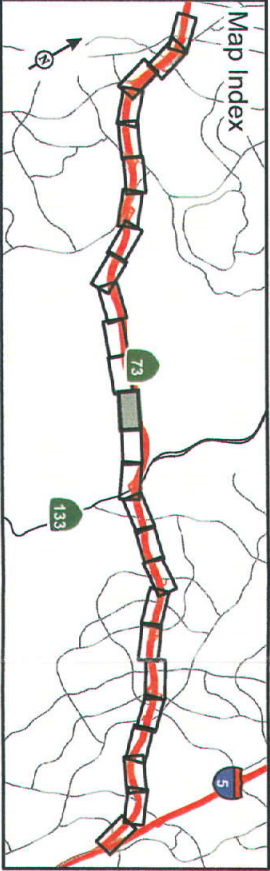


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



SOURCE: Air Photo USA (2008).

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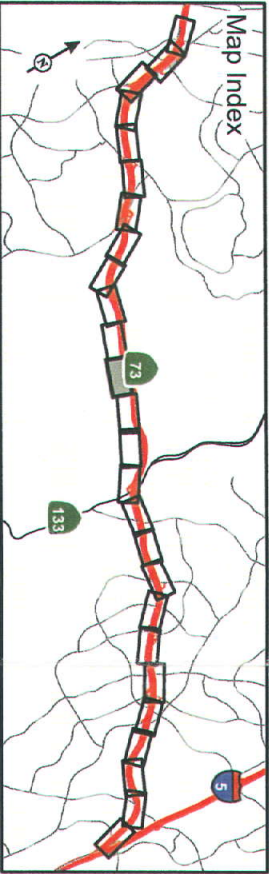


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



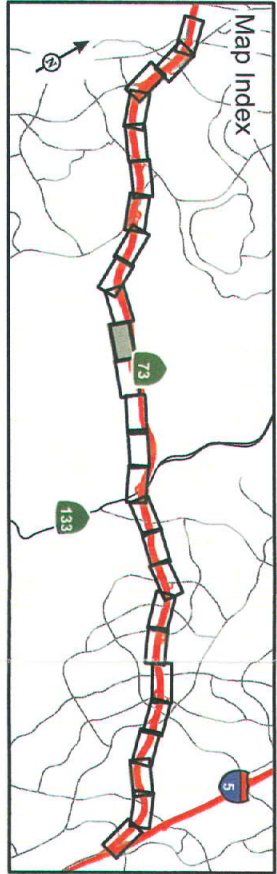
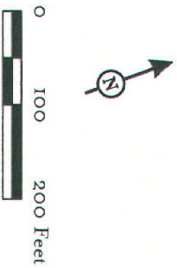
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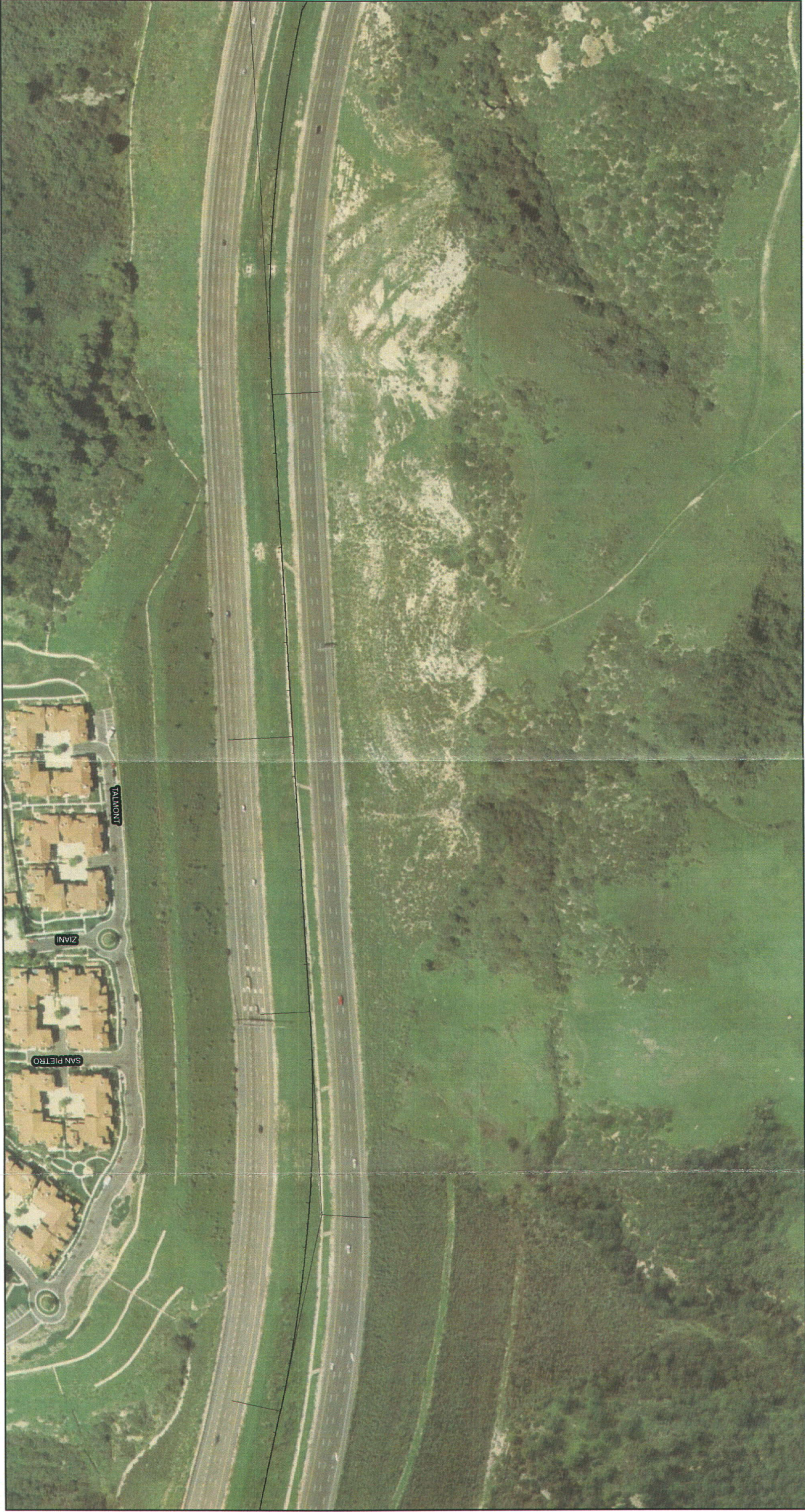
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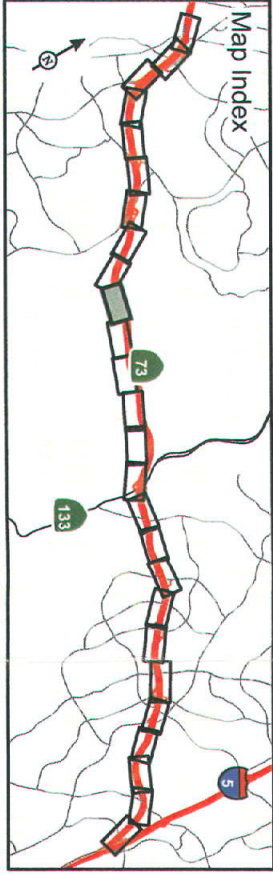
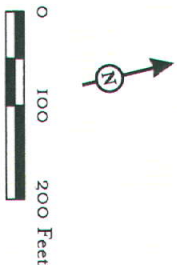
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- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





Legend

- Stormwater Basin (Non-Jurisdictional)
- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit





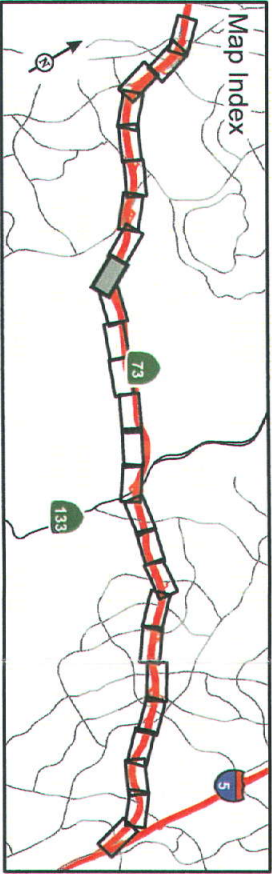
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- Stormwater Basin (Non-Jurisdictional)
- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit



SOURCE: Air Photo USA (2008).

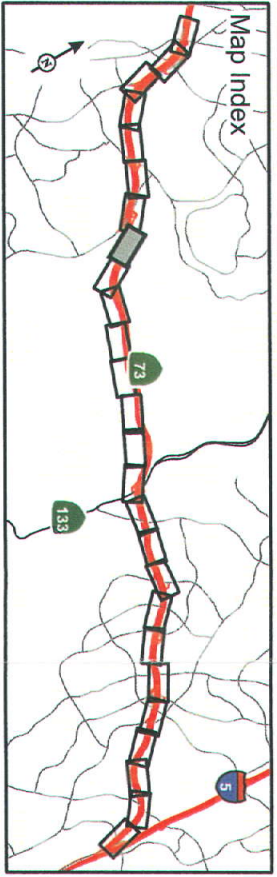
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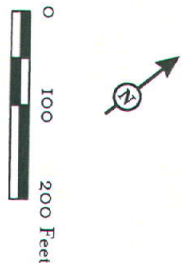
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- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit



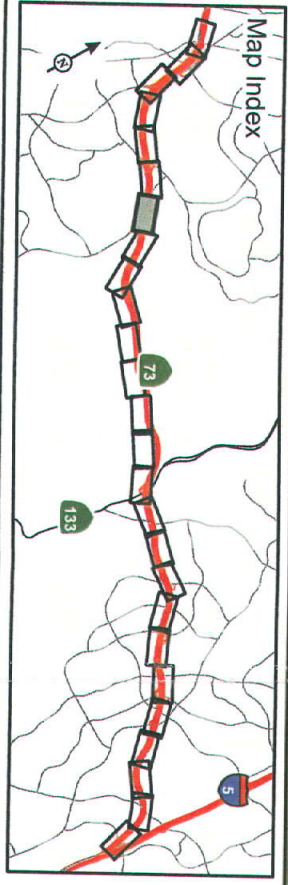


Legend

- Stormwater Basin (Non-Jurisdictional)
- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit



SOURCE: Air Photo USA (2008).
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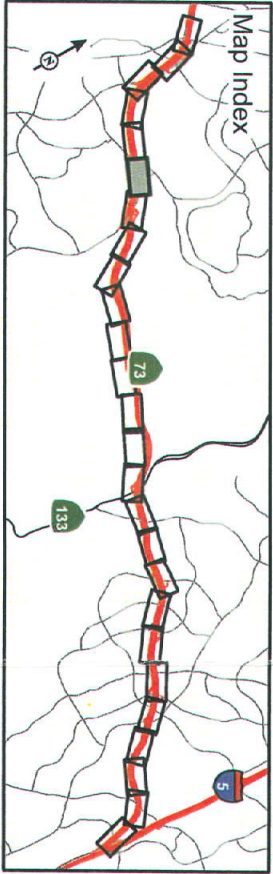
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Stormwater Basin (Non-Jurisdictional)

Stormwater Basin (Potential Corps & CDFG Jurisdiction)

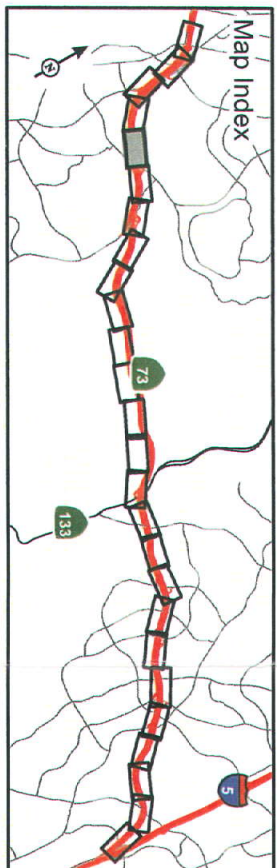
Soil Pit

0 100 200 Feet



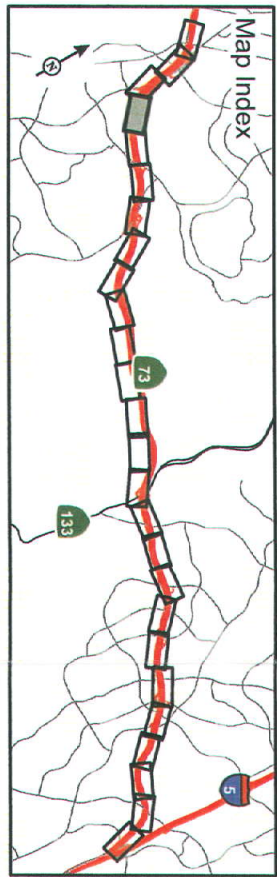


- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit



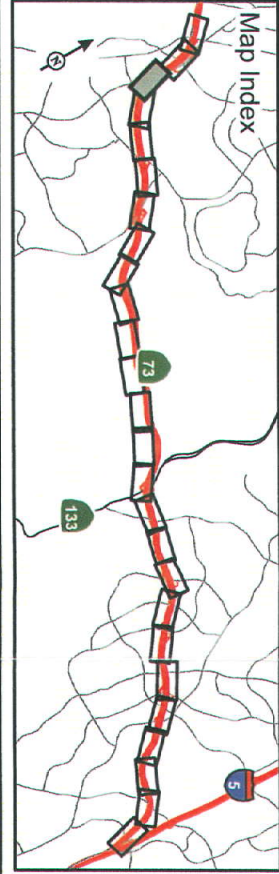
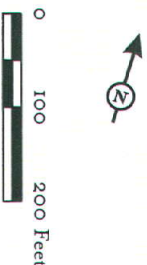


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Stormwater Basin (Non-Jurisdictional)

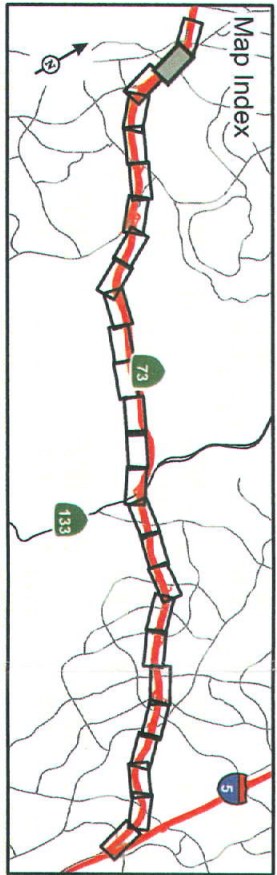
Stormwater Basin (Potential Corps & CDFG Jurisdiction)

Soil Pit





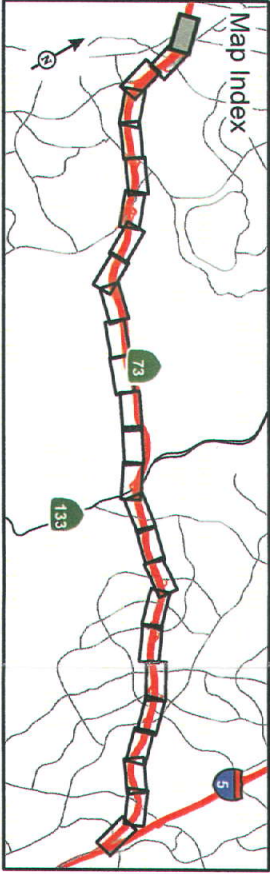
- Legend
- Stormwater Basin (Non-Jurisdictional)
 - Stormwater Basin (Potential Corps & CDFG Jurisdiction)
 - Soil Pit





Legend

- Stormwater Basin (Non-Jurisdictional)
- Stormwater Basin (Potential Corps & CDFG Jurisdiction)
- Soil Pit



APPENDIX B

COPIES OF WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SR-73 BASIN #1194 City/County: IRVINE, ORANGE Sampling Date: 11/05/2008
 Applicant/Owner: CALTRANS State: CA Sampling Point: 1
 Investigator(s): SIMOND Section, Township, Range: S18, T6S, R9W TUSTIN 7.5-MINUTE
 Landform (hillslope, terrace, etc.): BASIN Local relief (concave, convex, none): CONCAVE Slope (%): 3%
 Subregion (LRR): _____ Lat: 33°39'11.837"N Long: 117°51'42.366"W Datum: _____
 Soil Map Unit Name: MYFORD NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes _____ No <u>✓</u>		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks:			

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Baccharis salicifolia</u>	<u>35%</u>	<u>40%</u>	<u>FW</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>35</u> x 2 = <u>70</u>
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species <u>5</u> x 5 = <u>25</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>40</u> (A) <u>95</u> (B)
1. <u>Azardia squarrosa</u>	<u>5%</u>		<u>UPL</u>	Prevalence Index = B/A = <u>0.42</u>
2. _____				Hydrophytic Vegetation Indicators:
3. _____				___ Dominance Test is >50%
4. _____				___ Prevalence Index is ≤3.0 ¹
5. _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				Hydrophytic Vegetation Present? Yes <u>✓</u> No <u>X</u>
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60%</u>	% Cover of Biotic Crust <u>0%</u>			
Remarks:				

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
15"	7.5 YR 4/3						sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and welland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 1"Water Table Present? Yes _____ No X Depth (inches): _____Saturation Present? Yes X No _____ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: MUCH OF BASIN BOTTOM IS LINED WITH CONCRETE
THEREBY CREATING AN IMPERMEABLE SURFACE

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SR-73 Basin # 1183 City/County: IRVINE, ORANGE Sampling Date: 11/09/2008
 Applicant/Owner: CALTRANS State: CA Sampling Point: 2
 Investigator(s): SIMONE DUON Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): 5%
 Subregion (LRR): _____ Lat: 33° 39' 1.559 N Long: 117° 51' 43.736 W Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>MUCH OF THE BASIN IS SHADED BY FORESTRY BUFFERING</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.33</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0' ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Baccharis salicifolia</u>	<u>20%</u>		<u>FW</u>	
2. _____				
3. _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Herb Stratum (Plot size: _____)				
1. <u>Salsola tragus</u>	<u>20%</u>		<u>UPL</u>	
2. <u>Bromus sp</u>	<u>20%</u>		<u>UPL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>40%</u>	% Cover of Biotic Crust _____			
Remarks: <u>MULFAT IS THE ONLY POTENTIAL HYDROPHYTIC PLANT</u>				

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
10"	10YR 4/2						Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☒ Water Marks (B1) (Nonriverine)
☒ Sediment Deposits (B2) (Nonriverine)
☐ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☒ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: RAIN DAY BEFORE SURVEY DETECTED BASIN BOTTOM
CONCRETE LINED

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SR-73 BASIN # 1180 City/County: IRVINE, ORANGE Sampling Date: 11/05/2008
 Applicant/Owner: CALTRANS State: CA Sampling Point: 3
 Investigator(s): SIMONE, QUON Section, Township, Range: S1B, T6S, R9W TUSTIN 7.5-MILE
 Landform (hillslope, terrace, etc.): BASIN Local relief (concave, convex, none): CONCAVE Slope (%): 3%
 Subregion (LRR): _____ Lat: 33°38'57.985"N Long: 117°51'36.748"W Datum: _____
 Soil Map Unit Name: MYFORD NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>6-12" OF SEDIMENT HAS COLLECTED ON TOP OF CONCRETE BOTTOM OF DETENTION BASIN. BASIN IS UPSTREAM OF SANTIAGO CREEK. DOES NOT APPEAR TO HYDROLOGICALLY CONDITIONED. UNCHARTED.</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>SALIX lasiolepis</u>	<u>10%</u>	<u>FACW</u>		Total % Cover of: _____ Multiply by: _____
2. <u>Baccharis californica</u>	<u>15%</u>	<u>FACW</u>		OBL species <u>10</u> x 1 = <u>10</u>
3. <u>Cotula coronopifolia</u>	<u>10%</u>	<u>OBL</u>		FACW species <u>30</u> x 2 = <u>60</u>
4. <u>RUMEX crispus</u>	<u>5%</u>	<u>FACW</u>		FAC species _____ x 3 = _____
5. _____	_____	_____		FACU species _____ x 4 = _____
<u>46%</u> = Total Cover				UPL species <u>40</u> x 5 = <u>200</u>
Herb Stratum (Plot size: _____)				Column Totals: <u>80</u> (A) <u>270</u> (B)
1. <u>FESCUE sp</u>	<u>40%</u>	<u>UPL</u>		Prevalence Index = B/A = <u>3.4</u>
2. _____	_____	_____		
3. _____	_____	_____		
4. _____	_____	_____		
5. _____	_____	_____		
6. _____	_____	_____		
7. _____	_____	_____		
8. _____	_____	_____		
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____	_____	_____		___ Dominance Test is >50%
2. _____	_____	_____		___ Prevalence Index is ≤3.0 ¹
<u>80%</u> = Total Cover				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks: _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
8"	10YR 4/2						Sandy Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

concrete lined bottom

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☒ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☒ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes 4 No _____ Depth (inches): 2-4"
 Water Table Present? Yes _____ No _____ Depth (inches): _____
 Saturation Present? Yes _____ No _____ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: BASIN IS ISOLATED FROM SURFACED WATER
 SOUTH END OF BASIN HAS CONCRETE BOTTOM COVERED WITH
 6-12" OF SEDIMENT. PLANTING NEAR CENTER OF BASIN
 STANDING WATER & HYDROPHITIC VEGETATION IS PRESENT BUT HYDRA
 SOLS ARE NOT FROM FROM DAY BEFORE MOST WETLY
 REASON FOR IN UR DATION

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SR 73 Basin #1156 City/County: Orange County Sampling Date: 11/5/08
 Applicant/Owner: CALTRANS State: CA Sampling Point: 4
 Investigator(s): IQ, LS, AR Section, Township, Range: S18, T4S, R9W TUSTIN 7.5-14 MINUTE TOWNSHIP
 Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): CONCAVE Slope (%): 3%
 Subregion (LRR): _____ Lat: 33° 38' 33.506" N Long: 117° 51' 32.688" W Datum: _____
 Soil Map Unit Name: MYFORD NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>WETLAND CONDITIONS EXIST BUT BASIN IS ISOLATED WATERS AND HAVE NO HYDROLOGIC CONNECTION TO ANY UNDESIGNATED WATERS</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A/B)
4. _____	_____	_____	_____		
_____ = Total Cover					
Prevalence Index worksheet:					
Total % Cover of:		Multiply by:			
OBL species	<u>31</u>	x 1 =		<u>31</u>	
FACW species	<u>12</u>	x 2 =		<u>24</u>	
FAC species	<u>3</u>	x 3 =		_____	
FACU species	_____	x 4 =		_____	
UPL species	<u>2</u>	x 5 =		<u>10</u>	
Column Totals:	<u>48</u>	(A)		<u>65</u> (B)	
Prevalence Index = B/A = <u>1.3</u>					
Hydrophytic Vegetation Indicators:					
<input checked="" type="checkbox"/> Dominance Test is >50%					
<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹					
____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)					
____ Problematic Hydrophytic Vegetation ¹ (Explain)					
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____					
Remarks:					

SOIL

Sampling Point: 4

- Check F2 -

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 4/3	100%	none				Sandy clay loam	Saturated
3-8	N 2.5/Black	90%					Sandy clay loam	Saturated
3-8	10Y 3/1	10%					Sandy clay loam	Saturated
8+	2.5Y 4/2	100%					Sandy loam	Saturated

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Pit is located w/in ^{SILT} ~~PHOT~~ ~~COM~~ Outside ~~channel~~ soils are dry + no hydric indicators, therefore add'l data sheet not required

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input checked="" type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquifer (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

 Surface Water Present? Yes ☒ No _____ Depth (inches): 2"
 Water Table Present? Yes _____ No _____ Depth (inches): _____
 Saturation Present? Yes ☒ No _____ Depth (inches): 0-8+
 (includes capillary fringe)
Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ISOLATION NO CONNECTION TO ANY JURISDICTIONAL WATERS.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR-73 BASIN # 7651 City/County: ALISO VIEJO / ORANGE Sampling Date: 11-18-2008
 Applicant/Owner: CALTRANS State: CA Sampling Point: 5
 Investigator(s): LSIMONE, I. QUON Section, Township, Range: S6T7SR8W LAGUNA BEACH
 Landform (hillslope, terrace, etc.): BASIN Local relief (concave, convex, none): CONCAVE Slope (%): 5%
 Subregion (LRR): _____ Lat: 33°35'24.355"N Long: 117°45'13.314"W Datum: _____
 Soil Map Unit Name: ALO-BOSANKO NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>TYPHA</u>	<u>100</u>	<u>OBL</u>		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>100</u> x 1 = <u>100%</u>
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
Herb Stratum (Plot size: _____)				Column Totals: _____ (A) _____ (B)
1. _____	_____	_____	_____	Prevalence Index = B/A = <u>1</u>
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:
3. _____	_____	_____	_____	___ Dominance Test is >50%
4. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
5. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
18"	627	1.25/104					Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☒ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☒ 1 cm Muck (A9) (LRR D)
☒ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☒ Loamy Mucky Mineral (F1)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- ☒ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☒ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☒ Drift Deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☒ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☒ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 2"Water Table Present? Yes ☒ No ☐ Depth (inches): _____Saturation Present? Yes ☒ No ☐ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: ACROSS EL TORNADO ROAD FROM CROOK? CONFIRM

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SR-73 BASIN # 757 City/County: ALBUQUERQUE/GRAND Sampling Date: 11-18-2008
 Applicant/Owner: CALTRANS State: CA Sampling Point: 6
 Investigator(s): L. SIMONE, L. QUON Section, Township, Range: 56 T 75 R 0W LAGUNA BEACH
 Landform (hillslope, terrace, etc.): BASIN Local relief (concave, convex, none): CONCAVE Slope (%): 5%
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: ALQ-BOSANKO NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology YES significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks: <u>ARTIFICIALLY CONSTRUCTED BASIN DOES NOT HAVE HYDROLOGIC CONNECTION TO NADABAY LAGUNA CANAL CIRCUIT. WATER ACCUMULATED IN BASIN MOST LIKELY FROM NUBARCA FLOODS</u>	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u>	(A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u>	(B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u>	(A/B)
4. _____					
				Prevalence Index worksheet:	
				Total % Cover of:	Multiply by:
				OBL species <u>90</u>	x 1 = <u>90</u>
				FACW species <u>10</u>	x 2 = <u>20</u>
				FAC species _____	x 3 = _____
				FACU species _____	x 4 = _____
				UPL species _____	x 5 = _____
				Column Totals: <u>100</u>	(A) <u>110</u> (B)
				Prevalence Index = B/A = _____	
				Hydrophytic Vegetation Indicators:	
				___ Dominance Test is >50%	
				___ Prevalence Index is ≤3.0 ¹	
				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
				___ Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>TYIPA</u>	<u>90%</u>	<u>OBL</u>	
2. <u>Salix Aeg.</u>	<u>10</u>	<u>FACW</u>	
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
_____ = Total Cover			
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
_____ = Total Cover			
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____	

Remarks:

APPENDIX C

POTENTIAL ACOE, CDFG, AND RWQCB JURISDICTIONAL AREAS

Table A: Potential ACOE, CDFG, and RWQCB Jurisdictional Areas

Basin Number	Latitude (North)	Longitude (West)	Acreage	California Quadrangle	Hydrologic Regime	Likely ACOE Jurisdictional Status	Potential ACOE Nonwetland Waters (acres)	Potential ACOE Wetlands (acres)	CDFG (acres)	RWQCB (acres)	Connection to Jurisdictional Waters	Concrete-Lined	Biological Characteristics
457L	33 32'46.181"	117 40'30.032"	0.637	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
506R	33 33'28.697"	117 40'54.657"	0.423	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
535L	33 33'33.073"	117 41'29.414"	0.247	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
583L	33 34'6.855"	117 42'4.09"	0.673	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
604R	33 34'26.66"	117 42'18.727"	0.706	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Freshwater Marsh
613L	33 34'23.812"	117 42'30.046"	0.423	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/Freshwater Marsh
630L	33 34'32.011"	117 42'45.655"	0.221	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Unvegetated
635L	33 34'32.475"	117 42'55.286"	0.875	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/Onamerial
654R	33 34'50.649"	117 43'10.533"	0.996	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Onamerial
659L	33 34'48.671"	117 43'20.518"	1.049	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal
696R	33 35'16.511"	117 43'54.722"	1.221	San Juan Capistrano	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal
757L	33 35'24.75"	117 45'3.135"	0.565	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	No	Riparian/Ruderal
765L	33 35'24.355"	117 45'13.314"	1.324	Laguna Beach	Upland Basin	Jurisdictional	0	1,324	1,324	1,324	Direct	No	Riparian
780R	33 35'33.668"	117 45'30.094"	0.402	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/Scattered mulefat
785L	33 35'26.547"	117 45'35.613"	0.183	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
789L	33 35'33.053"	117 45'40.684"	0.019	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/CSS
808R	33 35'46.411"	117 45'51.722"	2.054	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/nomative grassland
859L	33 36'2.305"	117 46'51.812"	0.602	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Nomative Grassland
878R	33 36'11.516"	117 47'11.947"	1.073	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Mostly Nomative Grassland
883L	33 36'7.216"	117 47'18.318"	0.42	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Nomative Grassland
893L	33 36'9.819"	117 47'29.974"	0.319	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Nomative Grassland
922R	33 36'27.663	117 47'56.471"	1.752	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Nomative Grassland
930L	33 36'26.053"	117 48'9.972"	0.471	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Nomative Grassland
1032L	33 37'21.25"	117 49'41.967"	0.416	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal
1032R	33 37'26.812"	117 49'39.263"	1.225	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Nomative Grassland
1075L	33 37'45.646"	117 50'19.155"	0.698	Laguna Beach	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Scattered Mulefat
1081L	33 37'48.329"	117 50'27.381"	0.927	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/Scattered Mulefat
1085L	33 37'49.803"	117 50'32.338"	0.627	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
1076R	33 37'50.823"	117 50'22.307"	0.278	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Ruderal/Scattered Mulefat
1080R	33 37'53.003"	117 50'25.971"	0.467	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Mostly Absent/Isolated Freshwater Marsh
1133L	33 38'13.019"	117 51'22.225"	1.227	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Nomative Grassland

Table A: Potential ACOE, CDFG, and RWQCB Jurisdictional Areas

Basin Number	Latitude (North)	Longitude (West)	Acres	California Quadrangle	Hydrologic Regime	Likely ACOE Jurisdictional Status	Potential ACOE Nonwetland Waters (acres)	Potential ACOE Wetlands (acres)	CDFG (acres)	RWQCB (acres)	Connection to Jurisdictional Waters	Concrete-Lined	Biological Characteristics
1137L	33 38'16.382"	117 51'26.634"	0.22	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Mostly Nonnative Grassland
1143L	33 38'22.188"	117 51'31.105	0.17	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Nonnative Grassland
1151L	33 38'27.182"	117 51'34.994"	0.47	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal
1156R	33 38'33.506	117 51'32.688"	0.67	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Riparian/Ruderal
1149L	33 38'25.04"	117 51'40.59"	0.522	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Unknown	Nonnative Grassland
1180R	33 38'57.985"	117 51'36.748"	1.306	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Riparian/Ruderal
1183L	33 39'1.559"	117 51'43.756"	0.23	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Isolated Mulefat
1194R	33 39'11.837"	117 51'42.366"	1.876	Tustin	Ephemeral	Nonjurisdictional	0	0	0	0	Indirect	Yes	Ruderal/Mulefat Scrub

ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game
RWQCB = Regional Water Quality Control Board

APPENDIX D

BASIN SITE PHOTOS



Basin 457L



Basin 535L



Basin 604R



Basin 630L



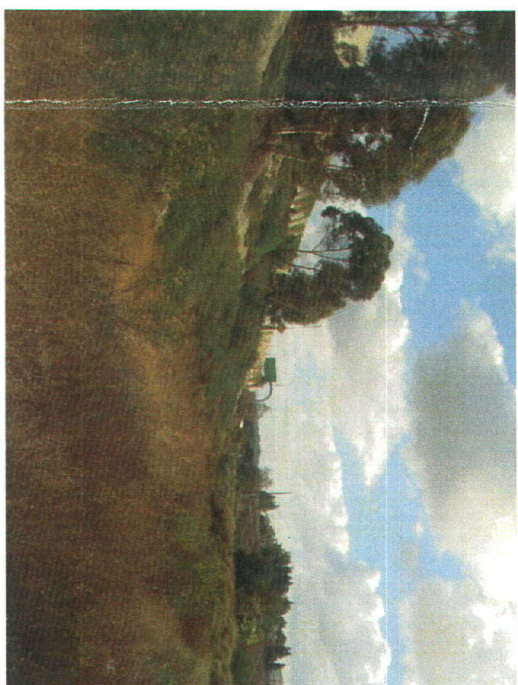
Basin 506R



Basin 583L



Basin 613L



Basin 635L

APPENDIX D
SHEET 1 OF 5

SOURCE: Natural Environment Study: Jurisdictional Delineation, 2008

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Basin 654R



Basin 696R



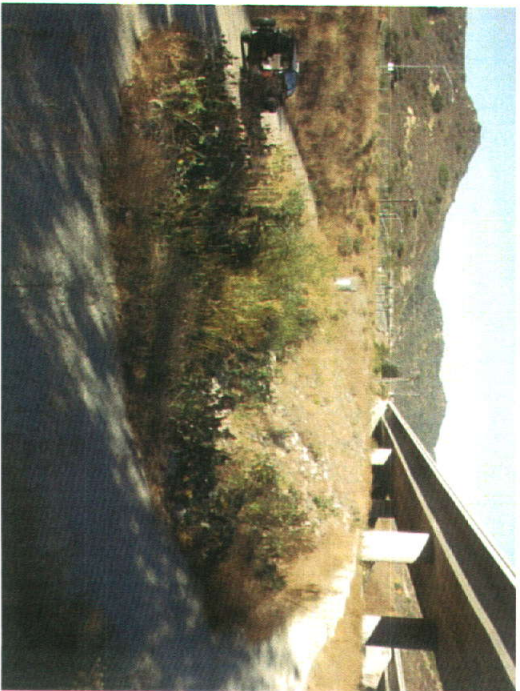
Basin 765L



Basin 785L



Basin 659L



Basin 757



Basin 780R



Basin 789L



Basin 808R



Basin 878R



Basin 893L



Basin 930L



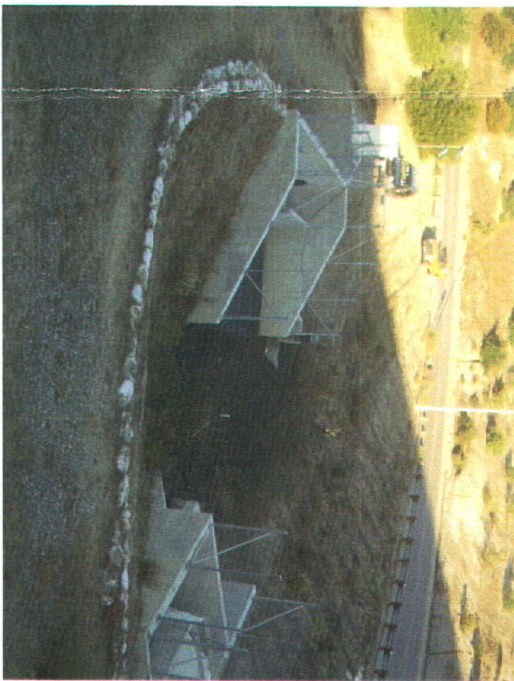
Basin 859L



Basin 883L



Basin 922R



Basin 1032L



Basin 1032R



Basin 1076R



Basin 1081L



Basin 1133L



Basin 1075L



Basin 1080R



Basin 1085L



Basin 1137L



Basin 1143L



Basin 1151L



Basin 1180R



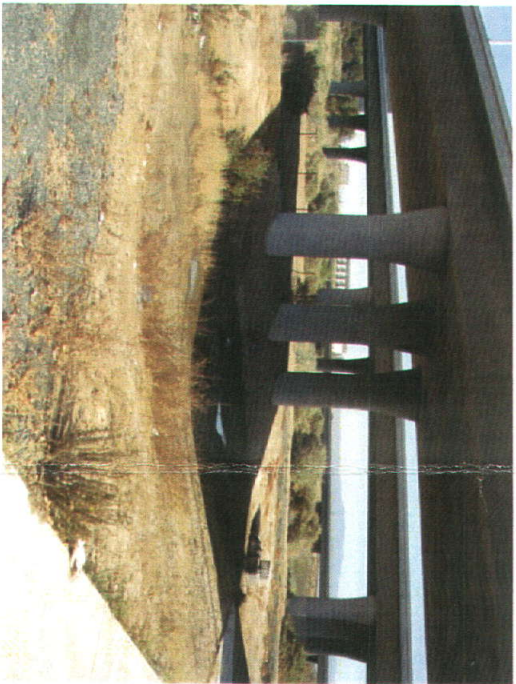
Basin 1194R



Basin 1149L



Basin 1156R



Basin 1183L

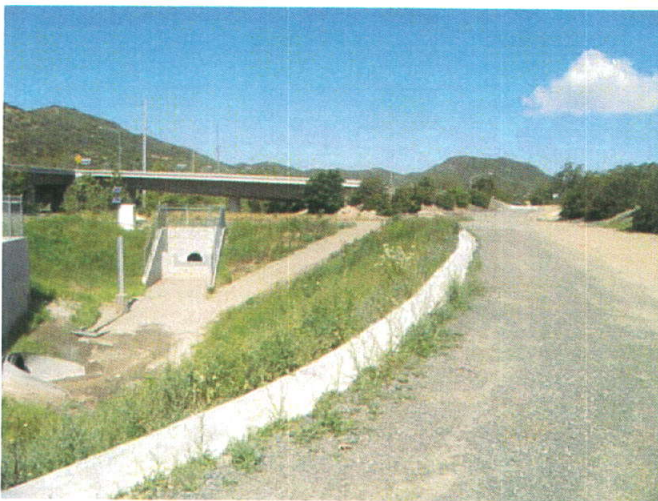
Appendix E Representative Site Photos



No work is proposed to occur at Basin 765L. View to the southeast.



Caltrans proposes to construct v-ditches at Basin 878R. View to the west.



Basin 780R. View to the west.



Caltrans proposes to conduct slope repair and stabilization at Basin 780R adjacent to the Laguna Canyon Road west bound off-ramp. View to the north.

APPENDIX E

SR-73 Basin Sedimentation Project

Representative Site Photos

EA# 0H4400

12-ORA-73 PM 10/24.5

Appendix F Biological Resources Maps



BASIN 765L

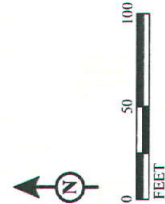
SR-73 Basin Sedimentation Project

Vegetation and NCCP
12-ORA-73 PM 10/24.5
EA 0H4400

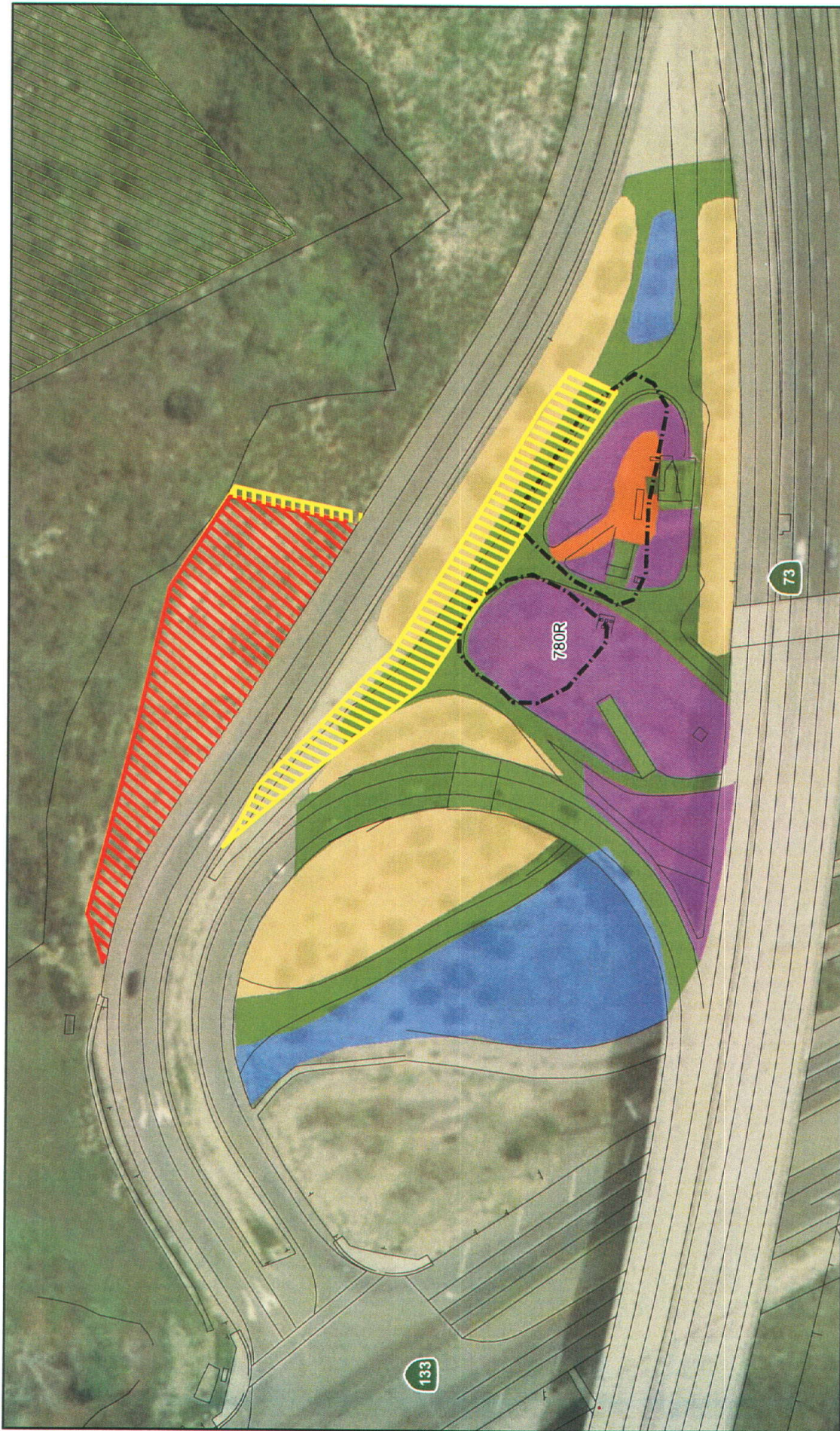
LEGEND

- Basins
- NCCP Reserve (6/24/08)
- Permanent Construction
- Temporary Construction, Access Road and Staging
- Bare Ground
- Coastal Sage Scrub
- Cattail Marsh
- Disturbed
- Disturbed/Ornamental/Ruderal
- Riparian Woodland

* No construction taking place around Basin 765L



SOURCE: DigitalGlobe (4/2008); Caltrans (6/2009)
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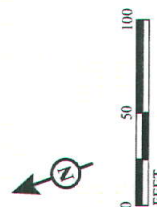


BASIN 780R

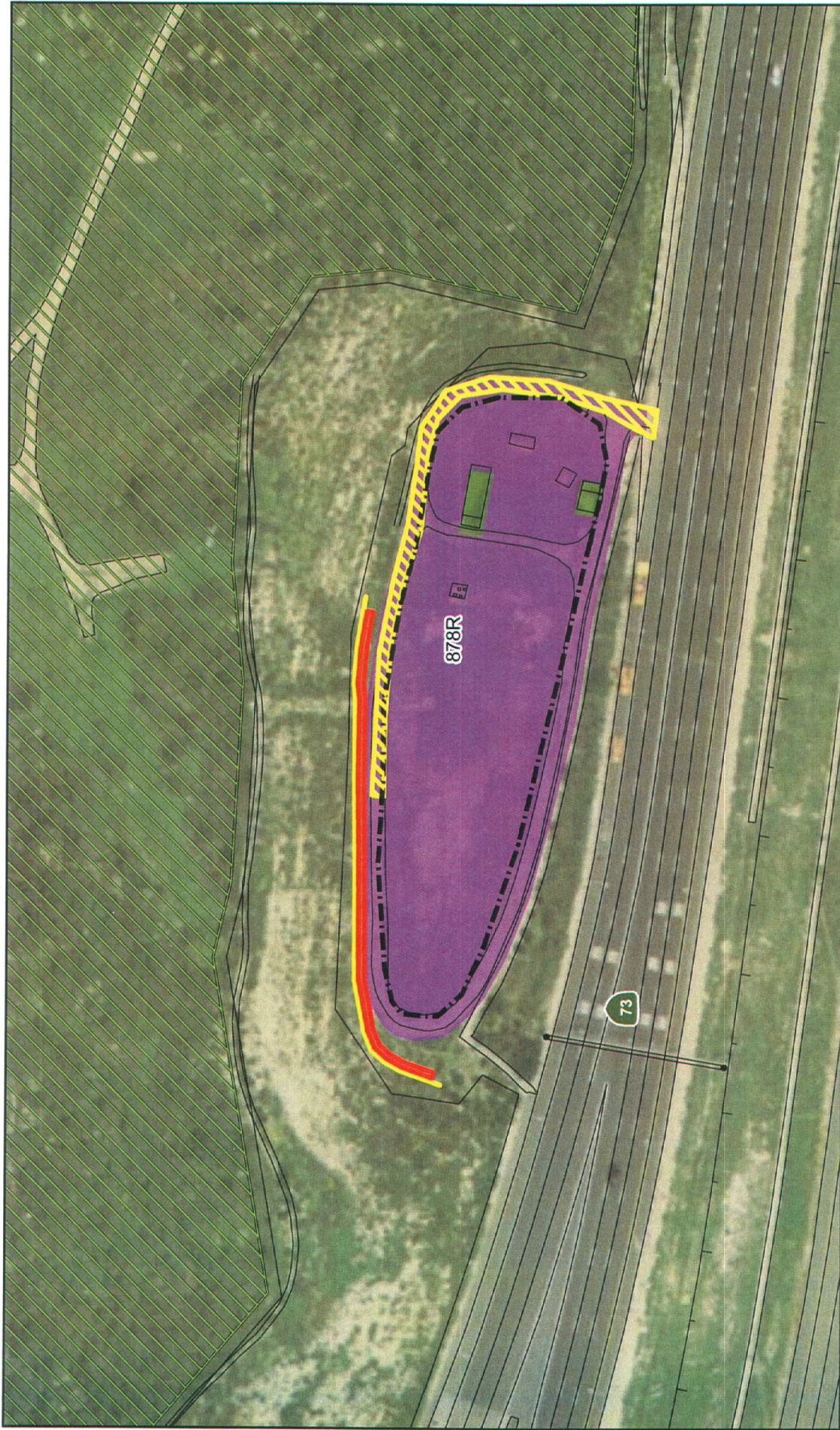
SR-73 Basin Sedimentation Project

Vegetation and NCCP
12-ORA-73 PM 10/24.5
EA 0H4400

- LEGEND**
- Basins
 - NCCP Reserve (6/24/08)
 - Permanent Construction
 - Temporary Construction, Access Road and Staging
- Vegetation**
- Bare Ground
 - Chaparral
 - Developed
 - Ornamental
 - Ruderal



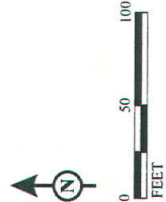
SOURCE: DigitalGlobe (4/2008); Caltrans (6/2009)
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BASIN 878R

LSA

- LEGEND**
- Basins
 - NCCP Reserve (6/24/08)
 - Permanent Construction
 - Temporary Construction, Access Road and Staging
- Vegetation**
- Bare Ground
 - Chaparral
 - Developed
 - Ornamental
 - Ruderal



SR-73 Basin Sedimentation Project
 Vegetation and NCCP
 12-ORA-73 PM 10/24.5
 EA 0H4400

SOURCE: DigitalGlobe (4/08); County of Orange (6/08)
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Appendix G USACE Jurisdictional Determination Letters



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

March 20, 2009

REPLY TO
ATTENTION OF

Regulatory Division

Charles Baker, Senior Environmental Planner
California Department of Transportation, District 12
Attention: Lesley L. Hill, Associate Environmental Planner/Biologist
3337 Michelson Drive, Suite 380
Irvine, California 92612

Dear Mr. Baker:

Reference is made to your request (File No. SPL-2009-00083-SCH) dated December 30, 2008, for a Department of the Army Permit to reduce sedimentation runoff into 39 storm water basins along the San Joaquin Hills Transportation Corridor (State Route 73 [SR-73]) within the city of Irvine, Laguna Beach, Aliso Viejo, and Laguna Nigel, Orange County, California. As part of the permit evaluation process, we have made the jurisdictional determination below.

Based on the information furnished in your Natural Environmental Study (Minimal Impacts) SR-73 Basin Sedimentation Project, SR-73 between Jamboree Road and I-5/SR-73 Interchange, 12-ORA-73 (PM 10.0-24.5) EA 0H4400, dated January 2009, we have determined that your proposed project, SR-73 Basin Sedimentation Project, may discharge dredged or fill material into a water of the United States or an adjacent wetland. Therefore, the project may subject to our jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit would be required from our office.

Additionally, based on the information furnished in your Natural Environmental Study (Minimal Impacts) SR-73 Basin Sedimentation Project, SR-73 between Jamboree Road and I-5/SR-73 Interchange, 12-ORA-73 (PM 10.0-24.5) EA 0H4400, dated January 2009, and information gathered from our site visit dated January 23, 2009, we have determined that the following sediment basins number: 457L, 535L, 583L, 604R, 613L, 630L, 635L, 654R, 659L, 696R, 757L, 780R, 785L, 789L, 808R, 859L, 878R, 883L, 893L, 922R, 930L, 1032L, 1032R, 1075L, 1085L, 1076R, 1133L, 1137L, 1143L, 1151L, 1156R, 1149L, 1180R, 1183L and 1194R, for your proposed project, SR-73 Basin Sedimentation Project, would not be subject to our jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit would not be required from our office.

This letter contains an approved jurisdictional determination for the SR-73 Basin Sedimentation Project. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer,
U.S. Army Corps of Engineers
South Pacific Division, CESPD-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by [insert date 60 days from date on NAP]. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to Sophia Huynh at the letterhead address by May 19, 2009. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

If you have any questions, please contact Sophia Huynh of my staff at 213.452.3357 or via e-mail at Sophia.C.Huynh@usace.army.mil.

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at:
<http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,



Jae Chung
Senior Project Manager
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Charles Baker,
California Department of Transportation,
District 12

File Number: SPL-2009-00083

Date: 03/20/2009

Attached is:

See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

DISTRICT ENGINEER
Los Angeles District, Corps of Engineers
ATTN: Chief, Regulatory Division
P.O. Box 532711
Los Angeles, CA 90053-2325
Tel. (213) 452-3425

If you only have questions regarding the appeal process you may also contact:

DIVISION ENGINEER
South Pacific Division, Corps of Engineers
ATTN: Tom Cavanaugh
Administrative Appeal Review Officer,
South Pacific Division, CESPDPDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399
Tel. (415) 503-6574
Email: thomas.j.cavanaugh@usace.army.mil

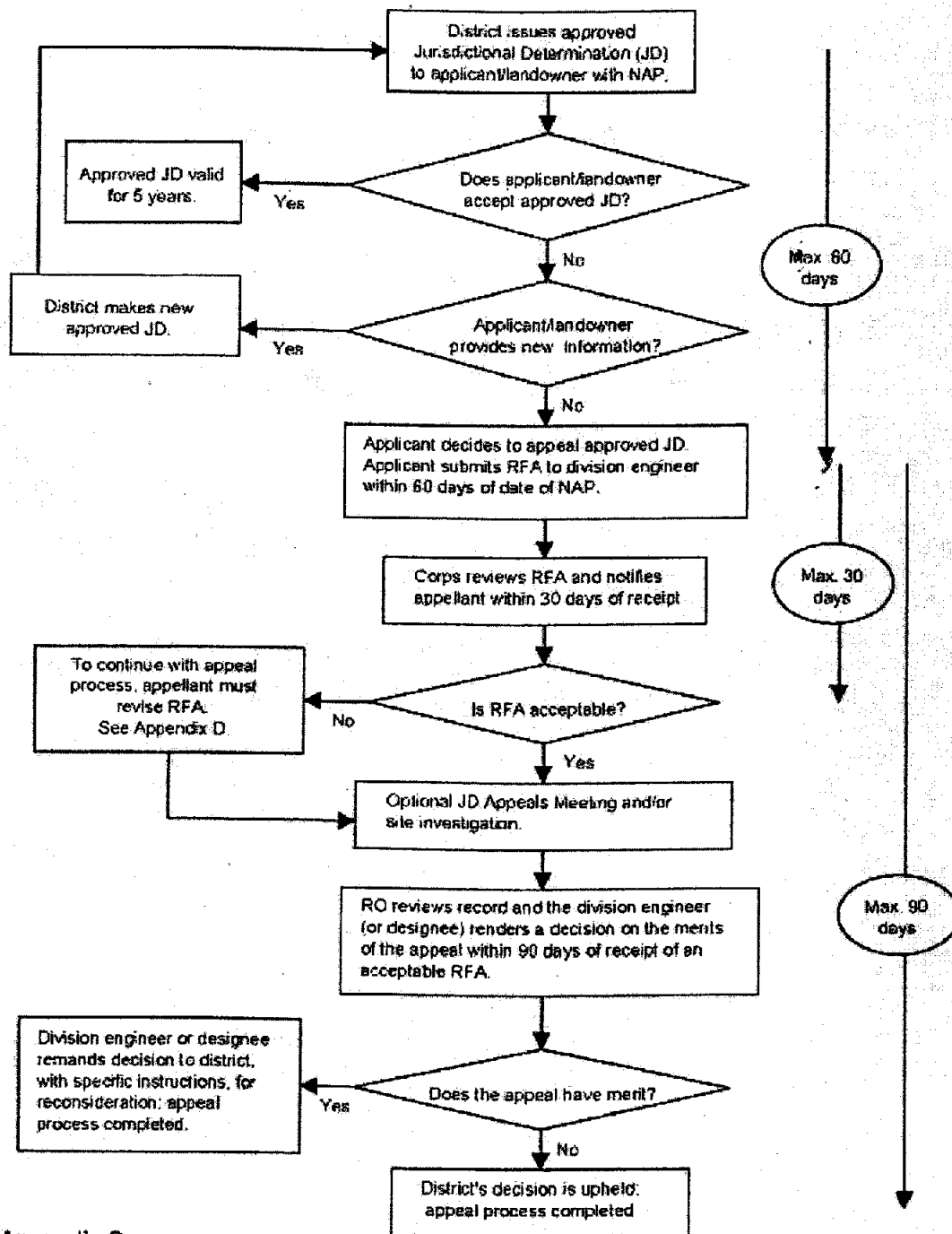
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

March 20, 2009

REPLY TO
ATTENTION OF
Regulatory Division

Charles Baker, Senior Environmental Planner
California Department of Transportation, District 12
Attention: Leslie Hill, Associate Environmental Planner/Biologist
3337 Michelson Drive, Suite 380
Irvine, California 92612

Dear Mr. Baker:

Reference is made to your request (File No. SPL-2009-00083) dated December 30, 2008, for a Department of the Army Permit to to reduce sedimentation runoff into 39 storm water basins along the San Joaquin Hills Transportation Corridor (State Route 73 [SR-73]) within the city of Irvine, Laguna Beach, Aliso Viejo, and Laguna Nigel, Orange County, California. As part of the permit evaluation process, we have made the jurisdictional determination below.

Based on the information furnished in your Natural Environmental Study (Minimal Impacts) SR-73 Basin Sedimentation Project, SR-73 between Jamboree Road and I-5/SR-73 Interchange, 12-ORA-73 (PM 10.0-24.5) EA 0H4400, dated January 2009, and information gathered from our site visit dated January 23, 2009, we have determined that the following sediment basins, number: 506R, 1081L, 765L, and 1080R for your proposed project, SR-73 Basin Sedimentation Project, would be subject to our jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit would be required from our office.

This letter contains an approved jurisdictional determination for the **SR-73 Basin Sedimentation Project**. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer,
U.S. Army Corps of Engineers
South Pacific Division, CESP-D-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by **May 19, 2009**. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to Sophia Huynh at the letterhead address by May 19, 2009. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

If you have any questions, please contact Sophia Huynh of my staff at 213.452.3357 or via e-mail at Sophia.C.Huynh@usace.army.mil.

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at:
<http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

"ORIGINAL SIGNED BY "

Jae Chung
Senior Project Manager
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: , California Department of Transportation, District 12: Charles Baker	File Number: SPL-2009-00083	Date: 03/20/2009
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecw/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

DISTRICT ENGINEER
Los Angeles District, Corps of Engineers
ATTN: Chief, Regulatory Division
P.O. Box 532711
Los Angeles, CA 90053-2325
Tel. (213) 452-3425

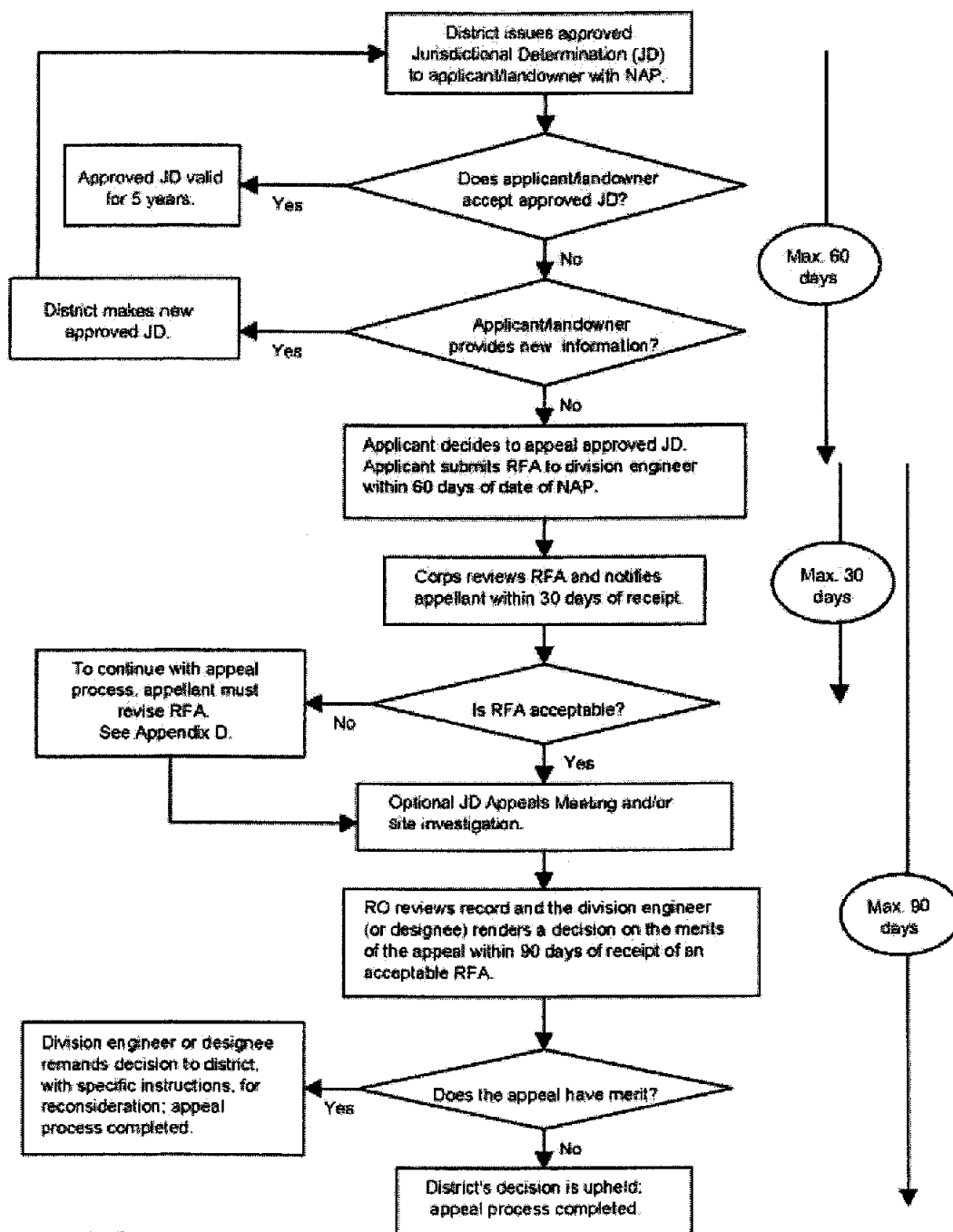
If you only have questions regarding the appeal process you may also contact:

DIVISION ENGINEER
South Pacific Division, Corps of Engineers
ATTN: Tom Cavanaugh
Administrative Appeal Review Officer,
South Pacific Division, CESP-D-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399
Tel. (415) 503-6574
Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<div data-bbox="133 1717 480 1747" data-label="Text">Signature of appellant or agent.</div>	<div data-bbox="826 1630 893 1657" data-label="Text">Date:</div>	<div data-bbox="1169 1630 1394 1657" data-label="Text">Telephone number:</div>
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Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C

